

Special Foreword by Dr. Jacques Gansler

FORTRESSES & ICEBERGS

The Evolution of the Transatlantic Defense Market
and the Implications for U.S. National Security Policy

Jeffrey P. Bialos
Christine E. Fisher
Stuart L. Koehl

Co-EDITOR AND Co-CONTRIBUTOR
Christer L. Mossberg

VOLUME I

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 01 SEP 2009		2. REPORT TYPE		3. DATES COVERED 00-00-2009 to 00-00-2009	
4. TITLE AND SUBTITLE Fortresses & Icebergs: The Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Center for Transatlantic Relations, Washington, DC			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 322	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Fortresses and Icebergs
*The Evolution of the Transatlantic Defense Market
and the Implications for U.S. National Security Policy*

By
Jeffrey P. Bialos
Christine E. Fisher
Stuart L. Koehl

Co-Editor and Co-Contributor
Christer L. Mossberg

Co-Contributors
Giovanni Gasparini
Andrew D. James

Volume I
Study Findings and Recommendations

Bialos, Jeffrey P., *Fortresses and Icebergs—The Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy, Volume I* (Washington, D.C.: Center for Transatlantic Relations, 2009).

© Center for Transatlantic Relations, The Johns Hopkins University and the U.S. Department of Defense 2009

Center for Transatlantic Relations
The Paul H. Nitze School of Advanced International Studies
The Johns Hopkins University
1717 Massachusetts Ave., NW, Suite 525
Washington, D.C. 20036
Tel. (202) 663-5880
Fax (202) 663-5879
Email: transatlantic@jhu.edu
<http://transatlantic.sais-jhu.edu>

ISBN 13: 978-0-9841341-1-3

“Would you tell me, please, which way I ought to go from here?”

“That depends a good deal on where you want to get to,” said the Cat.

“I don’t much care where —” said Alice.

“Then it doesn’t matter which way you go,” said the Cat.

“—so long as I get somewhere,” Alice added as an explanation.

“Oh, you’re sure to do that,” said the Cat, “if you only walk long enough.”

—Alice’s Adventures in Wonderland, Chapter 6

Table of Contents

Volume I

Study Findings and Recommendations

Special Foreword	vii
<i>Dr. Jacques Gansler</i>	
Foreword and Acknowledgments	xi
Executive Summary and Detailed Overview.....	1
Chapter 1	
The Study Context: The Unique Realities of the Defense Marketplace	43
Chapter 2	
The Study Methodology: A Disciplined Set of Diagnostics.....	55
Chapter 3	
Defense Market Access Realities: Continued Impediments But Gradually Better and More Open Buying Habits.....	65
Chapter 4	
Defense Market Outcomes: Measuring Traffic on the Fabled “Two-Way Street”	121
Chapter 5	
The Role of the EU and Other “European” Arrangements in Defense Markets: Realities, Prospects and Implications.....	171
Chapter 6	
Policy Implications and Recommendations	237
Appendix I	
Market Access Metrics and Trade Flow Analysis: A Methodological Note....	265
Appendix II	
Interviews Conducted.....	279

Appendix III	
U.S. Footprints of Major European Defense Firms	291
Appendix IV	
Proposed DoD Globalization Executive	299
About the Authors	301

Volume II

Country Studies

Chapter 7	
France	307
Chapter 8	
Germany	355
Chapter 9	
Italy	399
Chapter 10	
Poland	445
Chapter 11	
Romania	487
Chapter 12	
Sweden	527
Chapter 13	
United Kingdom	561
Chapter 14	
United States	627

Special Foreword

The United States today faces epic challenges—in economics, national security, energy and the environment—that closely link our national and personal security. Globalization lies at the heart of many of these challenges; this central driving force of change has come into America’s homes, affects the most fundamental elements of national governance and, ultimately, will shape both our prosperity and our security.

Globalization offers benefits but carries significant challenges and risks. The challenge for policy-makers is how to maximize the former while mitigating the latter. Hence, in the context of the global financial crisis, we are rethinking some of our basic operating models: redefining the government’s role in regulating an increasingly interconnected global economy. We also are realigning our defense capabilities to deal with threats—often not contained within a national boundary or identity—that endanger our national or economic well-being or even our survival. To better address the globalized threats we face, our government is already reorienting the capabilities of our national security forces to a new balance between conventional and irregular warfare, while keeping homeland security a central focus.

The United States needs a new model of “globalized” national security for this changing world: we must realign longstanding policies away from go-it-alone approaches to coalition-building and cooperation in support of shared objectives with our allies. In this context, the Transatlantic relationship stands at the center of our approach to ensuring our future security. Our enduring alliance with our closest allies and friends will be critical to our strategy.

Yet, we face a clear set of challenges in our Transatlantic relationships—the need to develop shared views of the threat and joint solutions, the need to share technology in support of these efforts, and the need to maintain strong economic ties at a time when protectionism looms in the midst of a significant recession.

Now, when we most need to re-examine our Transatlantic security model, this new two volume study by Jeff Bialos and his co-authors—*Fortresses and Icebergs: The Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy*—provides key insights and a roadmap for the United States to leverage Transatlantic security opportunities. The study offers a deep and fresh understanding of the evolving Transatlantic defense marketplace, the role the U.S. government plays in shaping its future, and the defense market’s relationship to our national security.

Fresh, Detailed and Insightful Data

This important two volume work is particularly unique with respect to the detailed data on defense markets it provides. With approximately 231 Figures and Tables and in-depth chapters on the United States and seven European countries, it provides a rich data set beyond that seen in other studies. The country-specific assessments will be of great interest to government officials, industry executives and policy analysts alike.

Equally noteworthy, the authors developed and applied a detailed methodology in order to bring more objectivity to assessing defense markets. The methodology and extensive data focus on two specific issue areas:

- What is the degree of access U.S. firms can achieve in European defense and security markets, and to what degree can European firms access the equivalent U.S. markets? The study analyzes the range of market barriers, using quantitative measures where possible. It offers a more rigorous basis for understanding the barriers—beyond myth or perception.
- What are the effects of the European Union, as distinct from separate European nations, on the defense and security markets at the prime and lower tiers of industry? The study describes the significant changes underway in the European Union, which is coalescing roles and authorities in defense and security markets – as a regulator, coordinator and, gradually, buyer. This is a major development the United States cannot afford to ignore. We can no longer cooperate only on a bilateral level or through NATO; we must deal with the growing role of the European Union.

Why Do These Issues Matter?

Three aspects of market access are vital to the United States and Europe for our mutual security:

- *Coalition operations will be a central construct for future security operations.* Strong industrial linkages and pre-existing shared protocols and products encourage integrated, interoperable performance and offer significant battlefield and cost advantages. We cannot afford to again go into coalition operations as unprepared to work together as we were when we initiated Operation Iraqi Freedom.
- *Both the United States and Europe can gain from enhanced competition in consolidating defense markets.* More open and accessible acquisition programs on both sides of the Atlantic would afford opportunities to a wider set of competitors with a broader range of alternative solutions. We would get not only the cost savings and innovation benefits that competition inherently brings but also some new solutions resulting from European research and development spending – dollars we could save.
- *Growing protectionist risks, fueled by the ongoing economic crisis, are of great concern* as they can adversely impact national security and economic competitiveness. The global economic crisis exposes our weakest links; we must resist opting for local, short-term payoffs that may seriously harm our long-term best interests. Defense jobs and technology, already prone to protectionism, could become increasingly isolated if conscious efforts are not made to open these markets.

In short, the market access issues addressed by *Fortresses and Icebergs* really matter.

Timely to Current Policy Debates

Even as this study is being released, critical public policy decisions relevant to our European allies and the future U.S. security posture are being debated. This new two volume work tackles head-on a number of the key issues that will shape the future:

- Export control reforms, especially with respect to the International Traffic in Arms Regulations governing defense trade;
- Buy American and national buying preferences;

- Defense acquisition competition process, realities and decisions in both markets; and
- The nature of our engagement with the European Union, in addition to NATO and national governments in Europe, with respect to defense and security markets.

In sum, the United States needs to step now—with both feet—into the twenty-first century and embrace this reality: we can best deal with the threats posed by globalization by leveraging the solutions offered by global engagement with close allies. *Fortresses and Icebergs* offers an important foundation for this effort—setting forth both the rationale and the roadmap for our engagement with Europe on defense markets in support of our mutual security objectives.

Dr. Jacques S. Gansler
Roger C. Lipitz Chair in Public Policy and Private Enterprise,
School of Public Affairs, University of Maryland
Former Under Secretary of Defense for Acquisition,
Technology and Logistics, 1997-2001

Foreword and Acknowledgments

This two volume study in large part grows out of a contract awarded by the Office of the Deputy Under Secretary of Defense for Industrial Policy entitled “Assessment of the European Defense Industry and Market.” The consortium of firms performing the contract subdivided the project into three separate elements.¹ The third element of the overall project is the subject of this study. It focuses on evaluating:

- The degree of access of U.S. firms to European defense markets and the degree of access of European firms to the U.S. defense market (the “Market Access” analysis); and
- Evolving European (as distinct from national) defense industrial policy and its implications for the United States (the “European Defense Industrial Policy” analysis).²

Volume I of this study sets forth the overall study—its methodology, findings and recommendations. Volume II sets forth separate market access analyses for each of the eight countries studied.

The study involved a considerable number of participants for whose contributions and support my co-authors and I are very grateful.

First, in the course of this study, we conducted individual interviews and interactive roundtable discussions with several hundred people in Europe and the United States. The interviews and roundtables included foreign and U.S. government officials, market participants (mostly senior executives of leading defense firms), defense industry associations and defense industry analysts. A full list of persons interviewed and their affiliations are set forth in Appendix II. In each of the European countries examined, the Ministries of Defense and other relevant government agencies were very cooperative. Additionally, we met with officials of the European Union (both the European Commission and the European Defence Agency) and appreciate the time and cooperation they extended to us. We also met with a number of officials of the U.S. Department of Defense and the U.S. Military Services as well. Without their candid comments and willingness to participate, we would not have been able to prepare this assessment. We have done our best to reflect the overall sense of these interviews in this analysis. As per our agreement with these parties, we have not attributed any comments made to specific interviewees in this study.

Second, we are very thankful to the Director of International Cooperation, Albert Volkman, and his staff, in the Office of the Under Secretary of Defense for Acquisition, Logistics and Technology. They met with us regularly during the course of our study and shared their insights, and were helpful in organizing our meetings abroad in each of the relevant countries we visited.

¹ The first element of the contract called for providing a detailed forecast of major European defense markets (with data on the size, composition and market shares of suppliers), and the second element called for characterizing the major European defense firms. These two contract elements were separately performed and the results provided to the Department of Defense.

² It should be noted that the funding for this study was provided in part by the Department of Defense contract and in part by the Center for Transatlantic Relations at the Paul H. Nitze School of Advanced International Studies, Johns Hopkins University.

Third, we deeply appreciate the assistance of the U.S. Department of Defense's Office of Defense Cooperation (ODC) during the course of our study. In each country visited, local ODC officials met with us and gave us their frank assessment of the situation on the ground and also facilitated our meetings with relevant foreign government officials and market participants. ODC officials in each country also provided very useful comments on the draft country analyses in Volume II of this study—for which we are very grateful.

Fourth, with respect to the European Union and North Atlantic Treaty Organization (NATO), we appreciate greatly the assistance of the U.S. Missions to the European Union and NATO, respectively. In particular, we wish to acknowledge the substantial insights and assistance of Isabelle Maelcamp of the U.S. Mission to the European Union in Brussels, who provided us updates on the evolution of the European Commission's various directives, which have been a work in progress, and who also reviewed and provided helpful comments on the European Union portion of this study.

Fifth, we are thankful for a virtual “wiseman” group of reviewers who took the opportunity to review all or portions of the study and give us useful feedback. They include: Lt. Colonel Joseph Lask, U.S. Air Force (formerly of the ODC in Rome); Hélène Masson, Research Fellow, Fondation pour la Recherche Stratégique, Paris, France; Martin Meth, Renaissance Strategic Advisors (and formerly of Thales North America and the Department of Defense), Arlington, Virginia; Ralph Thiele, a private defense consultant resident in Germany who previously worked for the German Ministry of Defense; Martin Trybus, Professor of European Law and Policy, Birmingham Law School, University of Birmingham; and the Honorable Ben Wallace, a Member of Parliament in the House of Commons, Parliament of the United Kingdom. I also am thankful for a number of friends and current or former colleagues for their helpful comments on portions of the manuscript as it took shape, including: Dr. Daniel Hamilton, Richard von Weizsäcker Professor and Director of the Center for Transatlantic Relations at the Paul H. Nitze School of Advanced International Studies, Johns Hopkins University; and Franklin Kramer, a consultant who previously served as Assistant Secretary of Defense for International Security Affairs.

Sixth, we are thankful to Documental Solutions of Falls Church, Virginia, and JSA Partners of Boston, Massachusetts, two firms that worked on other portions of the Department of Defense contract. Joseph Schneider and Steve Miller of JSA Partners and Richard Wieland and Ben Moores of Documental Solutions (United Kingdom) provided valuable suggestions and reviewed and commented on portions of the study. Documental Solutions provided the supporting data used herein and we are particularly thankful to Diane Janeway, for her able assistance.

Seventh, we are very thankful to our co-contributors: Christer Mossberg of the United States, who also served as co-editor, Giovanni Gasparini of Italy, and Andrew James of the United Kingdom (whose biographies are in the “About the Authors” appendix). They all provided drafts of the country-specific analyses for Sweden, Italy and the United Kingdom respectively, and also commented on other portions of the study. Christer Mossberg, a longtime colleague with Sutherland Asbill & Brennan LLP, where I practice law, also provided invaluable advice throughout the monograph on legal issues (providing input on international and national legal regimes) and served as a general co-editor of the entire study. Giovanni Gasparini and Andrew James are well-known and distinguished European analysts of the defense industry. All of their insights and experience were invaluable to our

effort. However, as co-contributors, they bear no responsibility for and do not necessarily agree with all of the overall findings of this study.

Eighth, we are very grateful for the support, assistance and patience of our sponsors. In particular, we thank the Office of the Deputy Under Secretary of Defense for Industrial Policy, including former Deputy Under Secretary William Greenwalt, Gary Powell, the former Assistant Deputy Under Secretary for Industrial Policy and Dawn Vehmeier, Acting Director for Industrial Base Assessments.

Thanks also go to the Center for Transatlantic Relations at Johns Hopkins University's Paul H. Nitze School of Advanced International Studies, where I serve as a non-resident Fellow. The Center also provided significant funding and support and able editorial and logistical support. The Center, which serves as the EU Center of Excellence Washington, D.C., is grateful in turn to the European Commission for its support. Without the funding support, thoughtful input and encouragement from the Defense Department and the Center for Transatlantic Relations, this project would not have been possible.

Finally, I am very grateful for the very sizable and insightful contributions to this monograph by Christine E. Fisher and Stuart L. Koehl, my distinguished co-authors. This study was truly a collective work, and the findings and assessments were arrived at by us as a group. While all of those mentioned above made beneficial contributions to the monograph, ultimately my two co-authors and I alone take responsibility for all of its contents.

It also should be recognized that all statements of fact, opinion or analysis expressed are those of the authors only and do not reflect the official positions or views of U.S. Department of Defense or any other U.S. government department or agency or any institution or organization with which any of us are affiliated.

*Jeffrey P. Bialos
Washington, D.C.
September 2009*

Executive Summary and Detailed Overview

Executive Summary

The two central dynamics of the evolving defense marketplace—the drive for innovation to meet new twenty-first century military requirements and the drive for affordability in an era of increasingly constrained budgets and rising weapons costs—converge to create powerful incentives for governments to allow more open and competitive markets. In the consolidating defense markets that exist today, cross-border market access—the subject of this study—can be a useful tool for governments to facilitate competition, and the affordability and innovation that competition can bring.

Historically, defense markets have been among the most protected of any industrial sectors in light of their close relationship to sovereignty and national security as well as domestic employment and technology leadership considerations. Today, however, Transatlantic defense markets, driven by economic realities, are in transition from historically closed “national” markets to more open and competitive markets and somewhat “better value” buying habits. There have been material and gradual changes for the better in terms of market openness in the United States and most of the European countries studied.

The Evolution of European Defense Markets: Gradually More Open and Competitive Markets, But More Challenging for U.S. Suppliers

In Europe, the available data shows that protected national defense procurement markets in the classic defense product sectors we examined are gradually being replaced with markets where awards are increasingly made either on a more open and competitive basis or through European cooperative programs. Growing cooperative programs reflect the economic reality that national programs are becoming unaffordable for most European nations. There also is evidence of more emphasis on “best value for money” in European procurements and more buying for security need rather than to achieve social goals. The heavy reliance on sole source national buying is declining and there is evidence of increased inter-European buying (both directly and through European cooperative programs).

These trends vary by country and by market segment. Sweden is the most accessible market in Europe for U.S. firms and Italy and Romania are the least. France, historically a closed country, shows signs of opening—especially to other European suppliers—as it shifts from a traditional Gaullist strategy of independence to a neo-Gaullist Eurocentric approach. Across all nations ground and naval markets tend to be more closed and national while military aircraft and C4ISR (command, control, computers, communications, intelligence, surveillance and reconnaissance) markets tend to be more open and competitive. These European national trends also are evolutionary in nature; change in defense markets is inherently slow because defense programs, by their nature, tend to last many years. Not surprisingly, the lion’s share of contracts awarded on legacy programs continues to be awarded to national contractors on a sole source basis.

The high levels of U.S. spending for the war in Iraq—effectively a “bull market” in defense—created an upwards trend from 2004 to 2007 in both U.S. sales to European

nations and European sales to the United States. However, it is unlikely the U.S. sales to Europe will continue at these elevated levels as the war winds down (U.S. sales to Europe had already begun to decline in 2008) and it is uncertain that European participation in the U.S. market can be sustained at current levels.

Trends at the European level are likely to reinforce and accelerate the better national buying habits emerging in Europe. Europe is coalescing a defense identity and the European Union (EU) is developing a real role in defense markets—as a regulator, coordinator and, gradually, as a buyer. In particular, the pending enactment of European Commission (EC) Directives on Defense Procurement and Transfers are constructive steps forward. These new rules will help to eliminate fragmentation and redundant spending in European defense markets, and will introduce competition and the innovation and affordability that competition can bring. The new EC Directives also will likely reinforce and accelerate the better national buying habits emerging in Europe that we identified during this study.

The shift toward a “European” market and industry has other implications at the national level. Numerous of the European countries studied have emerging national policies of encouraging the development of a European, as distinct from national, defense industry; these governments face trade-offs between this goal and the desire to maintain a national defense industrial capability, with technological, employment and other benefits. These governments are also keenly aware of these trade-offs and are taking various approaches to reconciling them.

Paradoxically, despite constructive developments in European defense markets, the net effect of all of the European dynamics—at the national and EU level—is to create a tougher market environment for U.S. defense firms seeking to do business in Europe—especially U.S. subsystem suppliers.

- The increased competition in Europe means a decreased use of sole source awards, where American firms have derived significant sales. Moreover, in competitive procurements, U.S. firms must face increasingly robust solutions offered by other European and third-country (especially Israeli) suppliers and industry teams.
- There is evidence of an emerging European (as distinct from national) policy preference and Eurocentric buying pattern in the growing number of non-U.S. awards in European competitive procurements. Indeed, the U.S. win rate on competitive programs is low and the U.S. presence on large European programs is limited.
- The new EC Defense Procurement Directive, while ostensibly neutral on non-EU participation in European defense markets, affords national authorities the opportunity to use various formalized EU acquisition procedures (e.g., the “security of supply” and “security of information” provisions) to effectively exclude U.S. and other non-EU firms.
- The growth of European cooperative procurements unfortunately means fewer opportunities for U.S. firms in light of longstanding *juste retour* policies, under which participating governments negotiate work share agreements that allocate work to their own national firms on the basis of the investment of each country.
- There is clear evidence, beyond rhetoric, of a behavioral shift in Europe toward “designing around” or designing out components or subsystems regulated by the U.S. International Traffic in Arms Regulations (ITAR), which has a particularly adverse impact on U.S. subsystem and component suppliers.

- On the supply side of European markets, the fact of a very few, increasingly large, European defense firms creates powerful incentives for European governments to favor these firms in their procurement decision-making—reinforcing the European preference noted above—in order to maintain a robust European supplier base.

In sum, absent strategic action by the United States, the market position of U.S. firms in Europe is likely to erode over time—with occasional European buying of U.S. system solutions (for urgent requirements or where no other comparable or affordable European options exist) and fewer opportunities for U.S. subsystem suppliers.

The Evolution of U.S. Defense Buying: Somewhat More Open With Continued Challenges for Foreign Suppliers

In contrast to the challenges increasingly faced by U.S. firms in Europe, the future prospects in the United States for European firms appear somewhat more appealing.

The United States has a long history of competitive procurement but not of fully “open” procurement. Historically, foreign suppliers have often been excluded from competition through formal and informal means for a variety of reasons. However, the traditional attitudes are changing, and there is increased evidence of “openness” to foreign sources of supply at the prime level. European suppliers won some 28 percent of new competitive awards on major U.S. programs across the market areas we studied (typically as one of the lead suppliers on a team with other U.S. suppliers). This data reflects recent awards on the Army Light Utility Helicopter (LUH), the Marine One presidential helicopter, and other programs; the recent award of the tanker program (not included in the data) also is indicative. European firms also have “bought” into the U.S. market through acquisitions (large ones in the case of United Kingdom (UK) firms and smaller purchases of mostly dual-use firms by continental European firms) as well as greenfield start-up operations.

Moreover, the emerging elements of the Obama Administration defense acquisition policy tend to create incentives for U.S. Department of Defense (DoD) to allow additional market access for foreign suppliers in the future. In this regard, the new “demand” side emphasis is on affordability, more rapid fielding, more competition and “70 percent solutions”—putting the practical ahead of the perfect—in the context of shifting investment toward irregular warfare challenges. In the context of these new policy thrusts, enhanced market access can not only result in more competition, and the innovation and affordability it can bring, but also can facilitate our war fighters’ access to existing 70 percent solutions from abroad. Further, future “war” may be waged not via defense hardware power but by potentially devastating cyber or other global levers of power. In this context, there is even more of a premium on collaboration with our European Allies that may help to override market access impediments.

To be sure, significant challenges exist in the United States for European suppliers. These include institutional and cultural constraints, the sheer complexity of the U.S. market, the costs of entry, and security-driven measures. The risks of additional Buy American legislation and similar actions during the ongoing economic downturn and the failure to reform defense trade controls also are key factors that can undermine our ability to collaborate with our allies. Further, as defense budgets tighten due to our growing fiscal imbalances and competing economic needs (e.g., the recent stimulus package), it remains to be seen whether programs that feature large European value-added elements will have the domestic support to be sustained.

However, in the long term, a number of factors point to the gradual evolution of a more appealing environment for European firms, including: the size of U.S. spending and range of opportunities, signs of increasing customer willingness to consider foreign sources; and the increasing willingness of the United States to allow foreign firms to buy into the market through mergers, acquisitions and other forms of industrial collaboration.

It also should be recognized that the risks of “fortress-like” conduct on both sides of the Atlantic are interactive. U.S. policies and attitudes can have a bearing on European actions with respect to its defense market, and vice versa. A series of U.S. laws, policies and practices—the challenges posed by the ITAR, restrictive policies on foreign investment in U.S. defense firms, restrictive immigration policies and constant congressional Buy American proposals—can create an impression of U.S. protectionism that helps shape European actions regarding its defense market and enhances the risks that Europe will move in a reciprocal and more protectionist fashion.

While Long-Term Dynamics Tend to Favor an Open and Competitive Transatlantic Defense, Short-Term Impediments—Largely Government Rules, Policies and Practices—Curtail Its Development

In the long term, powerful societal trends and forces at work—the globalization of the broader economy, the economics of defense markets (especially rising costs), and increased reliance on commercial technology in defense systems—may encourage a more open and accessible Transatlantic defense market and “better value” buying by customers. However, this is one possible long-term trajectory and the future is yet to be written.

The reality today and for the foreseeable future is that a series of complex and inter-related market access barriers—embedded in government laws, rules, policies and practices—serve as a drag on Transatlantic defense market development. As we show below, the key market access impediments, which vary in degree by country, include:

- Domestic content rules;
- Informal domestic work share requirements;
- Offsets and *juste retour*;
- ITAR, the U.S. defense trade rules, which have resulted in a significant “design around” movement in Europe and thereby limited market opportunities for U.S. firms;
- Foreign investment rules and policies; and
- Continuing government ownership and control of defense firms in some countries.

In an era where firms can “buy” into foreign commercial markets globally through mergers, acquisitions and joint ventures, restrictions on foreign investment in defense assets have been a limiting factor on both sides of the Atlantic.

While these market access impediments all vary in form, at their core is the fundamental reality that governments have powerful incentives to spend their defense dollars at home to the extent possible for several interrelated reasons: 1) the close relationship of defense industries to national sovereignty and economic health; 2) a desire for operational sovereignty of their own systems; 3) anxieties over security of supply (national reliance or dependence on

other nations for sensitive systems); and 4) a desire to promote autonomous national industrial capabilities, employment—in a word, jobs—and technology leadership.

Significantly, the tendencies toward fortress-like conduct are likely to be exacerbated in the context of the current global financial crisis and serious recession. On both sides of the Atlantic, the understandable focus on sustaining and protecting domestic jobs is creating protectionist pressures that may constrain the ability of governments to maintain momentum toward more open defense procurement.

In sum, governments can drive the pace and scope of the development of the Transatlantic defense market through their actions. On our current trajectory, the development of better buying habits in the markets studied will be very gradual and evolutionary in nature—slow and lumpy—without strategic action by governments to address these impediments.

The Strategic Rationale for Action and Recommendations for Change

Developing a more open and competitive Transatlantic marketplace can have a number of potential benefits for U.S. national security: 1) encouraging competition, and the innovation and affordability it can bring, in consolidated defense markets marked by escalating weapons system costs; 2) facilitating greater force interoperability and capability acquisition by allies in an era where coalition warfare is the norm; 3) enhancing cooperation among allies in a world where collective action is more likely the norm than the exception; and 4) strengthening the U.S. defense industry, which through improved market access can lower per unit costs of our own systems. While greater Transatlantic defense industrial cooperation necessarily implies greater technology sharing, enhanced standards and appropriate security safeguards can appropriately mitigate associated risks.

The following are six core sets of actions, described in detail below, which we recommend the DoD consider undertaking in order to facilitate change in this area:

1. Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development and Globalization Agenda
2. Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development
3. Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Industrial Security, National Disclosure Policy, Procurement, Investment, and Buy National Tendencies
4. Put in Place the International “Hardwiring” for an Open and Competitive Transatlantic Defense Market: Engage on Sustained Basis With the EU and LOI 6 and Revitalize the Bilateral Declaration of Principle Process
5. Shape Demand-Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector
6. Create a Transatlantic Defense Industrial Dialogue to Catalyze Change

One of the core policy thrusts that permeate these recommendations is the need for the United States to accept the reality that for matters of security and defense and the related markets, Europe is evolving a set of central bodies with their own authorities and roles. Put another way, North Atlantic Treaty Organization (NATO) is no longer the only appropri-

ate multilateral forum for U.S.-European engagement on security and defense—especially defense market—matters.

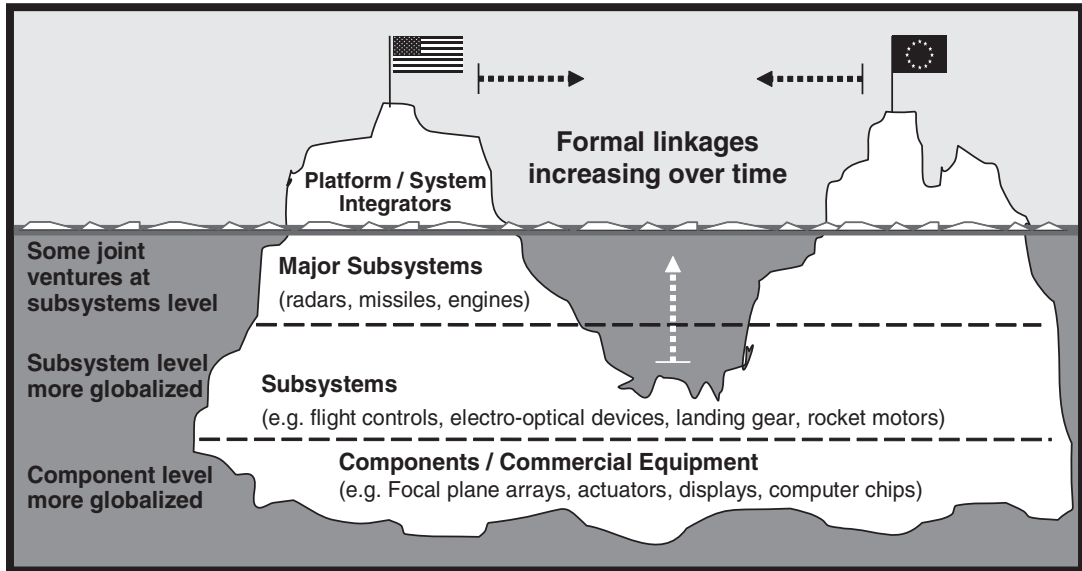
Accordingly, the United States should not rigidly cling exclusively to a bilateral process and engagement only with NATO. Rather, we should embrace, engage with, and work to shape the EU's emerging role in defense generally, and defense markets in particular, in a manner consistent with U.S. interests rather than continue to question or resist this development.

Thus, a lynchpin of a new U.S. strategy should be to engage on a bilateral and multilateral basis with the six major defense supplier nations in Europe (France, Germany, Italy, Spain, Sweden and the UK, hereafter referred to as the LOI 6), the EU and NATO—to create effective “hardwiring” and improved standards for an open and competitive Transatlantic defense market.

Finally, the emerging U.S. demand side shift currently underway—toward greater investment in low intensity conflict and coalition operations in support of such missions—should help shape our defense market policies. Thus, we should organize our armaments cooperation with European partners on the development of low intensity capabilities—where we can gain benefits from existing European security solutions in the war against terrorism—and enhanced interoperability—with an emphasis on facilitating secure communications, friendly fire avoidance and improved situational awareness needed to work effectively in coalitions. These efforts, less platform-oriented and in some aspects lower-tech in nature, are more realistic, less apt to engender protectionist tendencies on both sides of the Atlantic, and more likely to produce meaningful results—to benefit our war fighters and peace keepers.

Figure 1 Fortresses and Icebergs

The Transatlantic Defense Industry



Source: U.S. Department of Defense, Office of Deputy Under Secretary of Defense for Industrial Policy.

A Detailed Overview: The Study Focus, Plan and Findings

At the request of the DoD, this two volume study examines the Transatlantic defense market and its implications for U.S. policy.

- *First*, it analyzes the fabled two-way street in the Transatlantic defense market—evaluating the degree of market access of U.S. defense firms in European nations and of European defense firms in the United States.
- *Second*, it reviews the degree to which evolving European institutions, laws, rules, policies, practices and arrangements with respect to the defense industry also may have implications for the United States and the access of our firms in Europe (i.e., whether these rules and policies are creating a preference for buying European and, ultimately, a protected European procurement market).

At the center of the study is an analysis of what we somewhat euphemistically refer to as “fortresses” and “icebergs”—concepts prevalent in the defense world and, hence, the title of the study. “Fortress” refers to the demand side of the market—the insular tendencies toward closed national defense markets protected from foreign competition through government laws, policies and practices based on considerations of sovereignty, jobs, and security of supply, among others. Historically, the term “Fortress America” has been periodically used to suggest that the United States has largely been protectionist—a defense autarky—spending its defense dollars at home and keeping its large defense market largely closed. Abroad, individual European nations have also historically been viewed as engaging in fortress-like conduct with respect to defense procurement. At issue today, as European national behaviors change, is whether a “Fortress Europe” will develop, replacing national fortresses, as Europe itself forges its own defense identity.

“Icebergs” refers to the supply side of the market—the idea that the prime level defense firms on each side of the Atlantic are still largely isolated from each other—with little cross-ownership or integration—while globalization has led to considerably more integration at the sub-tier levels (especially the lower component levels where commercial technology and industries are involved). A chart prepared by the staff in the Office of the Deputy Under Secretary of Defense for Industrial Affairs in the late 1990s (see Figure 1) illustrates the “iceberg” construct—showing little Transatlantic prime level integration but greater connectivity of the “icebergs” below the surface, where both sets of primes draw on a commercial supplier base with stronger linkages.

While the “Fortresses and Icebergs” colloquialisms are in fact caricatures of a more complex and nuanced reality, they nevertheless are useful as images in considering the economic, political, and other dimensions of the Transatlantic arms market.

Looking Through the Kaleidoscope: Demystifying Fortresses and Icebergs

Examining the Transatlantic defense marketplace is like looking through a kaleidoscope. It is a multidimensional, complex, and ever-changing subject that can be viewed differently from different angles at any given moment, depending on the broader context of Transatlantic relations, the specific governments and companies involved, the defense markets involved, and other specific facts of the situation. Not surprisingly, given the complex and subjective nature of the subject, it is also difficult to find an objective and consistent analysis of the marketplace; most analyses consider only one element of the story or lack analytical rigor.

A central effort of this study is to identify metrics that help to understand and demystify the realities of “Fortresses and Icebergs”—to try to lend objectivity and rigor to this complex subject to the extent possible. What are the propensities toward fortress-like conduct in the United States and in Europe, and is a true Transatlantic market—with open cross-border competition in defense markets—developing?

Examining Both Demand and Supply. While the study is primarily focused on the demand side of the market, it cannot be viewed in a vacuum; the demand and supply side of the defense marketplace are closely related. For example, supplier consolidation (mergers, acquisitions, joint ventures and other collaborative arrangements) may be the best way to achieve market access. Conversely, the more open and competitive the nature of the Transatlantic armaments market, the better prospects exist for Transatlantic supplier collaboration and consolidation. Hence, we have given attention to the supply elements of the equation as well in this analysis.

The Multiple Roles of Governments in Defense Markets. The multiple roles of governments add to the complexity and uniqueness of defense markets. Governments function as regulators, customers and financiers of their defense industries and engage in bilateral and multilateral relations and armaments cooperation with other governments and multilateral institutions like NATO and the European Defence Agency (EDA). In taking this broad spectrum of actions, governments are often motivated by a mixture of goals (geopolitical, security, economic) that extend beyond simply providing the most innovative and affordable solutions to the war fighter.

Differentiating National and Intergovernmental Actions. Historically, defense industrial matters have been the province of national governments—of relevance here, the

U.S. government and national governments in Europe. Increasingly, however, the EU and other intergovernmental groups and arrangements have emerging roles in defense markets. Hence, this study focuses on, and differentiates, actions by the United States, national governments in Europe and, as discussed fully in Chapter 5, the EU and other evolving institutional arrangements in Europe.

The Regulatory Hardwiring for Market Access. Defense industries and markets have historically been among the most protected from competition by host governments because they are so closely linked to national sovereignty, jobs and the expenditure of state resources. Thus, this study seeks to “peel” through the multiple layers of the Transatlantic market “onion,” focusing on legal, regulatory and other impediments—the regulatory “hardwiring” critical to market access.

Policy Implications and Recommendations. Finally, the study ends by drawing these strands of analysis together. We set forth both an overall perspective on the broader policy implications of the evolution of the Transatlantic defense market and some recommendations for the future. Thus, the study inevitably focuses, in the end, on the core question of whether it is in the strategic interests of the United States and its European Allies to take concrete actions to catalyze the development of an open and competitive Transatlantic defense market.

The Study’s Two Volumes

Volume I sets forth the main body of the study. It covers:

- The overall defense market and policy context (geopolitical, economic, and security) in which the study is undertaken (Chapter 1)
- The study’s methodology (Chapter 2 and Appendix I)
- The study’s core findings on the accessibility of national defense markets in Europe and the United States (Chapters 3 and 4)
- The emerging role of the European Union and other “European” arrangements in defense markets (Chapter 5)
- The implications of the evolution of defense markets for U.S. national security policy and recommendations for the future (Chapter 6)

Volume II provides in-depth examinations of the defense markets of the eight countries: France, Germany, Italy, Poland, Romania, Sweden, United Kingdom and the United States. For each country reviewed, Volume II covers:

- Market Background and Evolution: Changes in Defense Strategy, Budgets, Force Structure and Equipage
- Armaments Cooperation With the United States
- Dynamics of Demand (the Acquisition System) and Supply (Defense Industrial Policies and Capabilities)
- Market Access Impediments and Issues

The Study Context: The Unique Realities of Defense Markets

As discussed in Chapter 1, the defense marketplace is governed by a number of relatively unique realities that shape the contours of this study. It is important to understand some of the key demand and supply dynamics that operate in defense markets in order to assess the accessibility of such markets. Specifically:

- **National Security Demand and the Drive for Innovation.** An immutable reality is that defense markets are different from other markets in large part because the “demand” is a function of national security threats and requirements—a classic “public good.” Thus, national security decision-making by governments critically affects the marketplace and the ability of firms to participate in it. In this twenty-first century era of multiple asymmetric security threats, a driving force of defense policy is a thrust for innovation needed to meet the wide ranging challenges of agile enemies.
- **The Economics of Defense: The Drive for Affordability.** The economics of defense is a powerful driver of change. The combination of constrained national defense budgets and rising weapon systems costs is a major dynamic in defense markets on both sides of the Atlantic. In this constrained environment, national buyers in Europe are moving toward increasingly cooperative buying to share costs and increasingly “better value” buying to reduce costs. As U.S. budgets flatten and recede from the height of the Bush Administration buildup, the United States inevitably is moving toward a greater focus on affordability. The combination of a flat or declining overall defense budget, plus pressure from growth in so-called “fixed” defense accounts (personnel and health care) and operations and maintenance (O&M) expenses, undoubtedly will constrain the key investment accounts (Research, Development, Testing and Engineering (RDT&E) and Procurement) from which defense firms derive much of their income. Additionally, the current global financial crisis and resulting recession is putting yet more strain on defense budgets and will likely force yet harder choices and a greater emphasis on affordability on both sides of the Atlantic.
- **The Role of Competition in Defense Markets: A Driver of Innovation and Affordability.** Both modern economic theory and empirical evidence have shown that full and open competition—where all sources of supply can compete—can produce both greater innovation and affordability. Defense markets are inherently “imperfect” in an economic sense and far from the Adam Smith model of many buyers and sellers who lack the ability to set prices. Defense markets are typically characterized by: a few (typically, government) customers, a “bid” model of competition, with relatively few new programs that can last for years, significant barriers to entry, and a limited number of suppliers in a consolidating supplier base. As history has taught, achieving best value results—rapidly fielded, innovative and affordable high-performance weaponry—is not just a matter of having a competitive bid market for early phases of programs. Rather, it also requires addressing the inherent difficulties in managing large, long-term programs with established incumbent contractors that are largely insulated from many of the market incentives that exist in the commercial world. Despite these market imperfections, competition has been a longstanding feature of U.S. defense markets—with at least several suppliers in most major markets and in the subsystems arena. Evidence shows that even a small number of competitors can produce benefits when compared to reliance on sole source suppliers. Moreover, there is no compelling evidence that models other than

competition—national teams, managed monopolies, or the like—produce better results; most evidence is to the contrary. The challenge going forward is multiple: 1) how to sustain sufficient competition for initial awards in an era of fewer, long-term programs and a consolidating supplier base; and 2) how to manage large programs to mitigate key risks and achieve better results (e.g., through a stronger cadre of experienced acquisition executives, steps to inject competition into long-term programs—especially at the subsystem level, and the like.)

- **Market Access as a Strategic Option to Maintain Competition in a Consolidating Market.** One significant strategic option for governments to maintain competition is to open their markets to foreign suppliers subject to appropriate security safeguards. Hence, “market access,” the central element of this study, is one of a number of useful tools for government procurement authorities in the context of a consolidating market. Where demand from a national customer can sustain only one or two national firms, the participation of foreign competitors can help sustain a competitive framework and the innovation and affordability it can bring—provided, of course, that appropriate security measures can be put in place.

The Methodology: The Use of Disciplined Diagnostics

Examining the complex Transatlantic arms market is not easy. Numerous past studies have tended to be relatively subjective and based more on value judgments than on empirical evidence. Hence, as set forth in Chapter 2, we have developed a detailed methodology designed to bring a greater degree of objectivity to the task. In the end, of course, there were judgments made—but they were fact-based—drawn from observations from hard data, interviews and dozens of previous studies in this field.

Study Scope: Systems in More “Classic” Defense Product Areas. From a policy perspective, this study has assessed and characterized the national and relevant intergovernmental policies and practices that affect access to defense markets broadly defined. However, from the standpoint of data, the study covers only the market for defense articles (systems, subsystems and products) in five traditional defense market areas: air vehicles, ships/submarines, ground vehicles, missiles/munitions and C4ISR.³ In undertaking this analysis, we have relied on, and analyzed, data provided by Documental Solutions (DOCSOL), which maintains extensive databases on defense contract awards in the United States and Europe.

Hence, this study does *not* include the burgeoning market for defense services, information technology and homeland security, and it generally does not include areas of clear dual-use or commercial technology. Also, the study does not examine space systems, subsystems or capabilities. This means a sizable portion of national security spending by the United States and European nations studied is not within this study data scope.

These limitations are important because the more commercial and dual-use technology-driven markets and the markets for services tend to be more globalized, more widely competitive, more open to new entrants and often less nationally sensitive. While our findings are valid in defense markets generally, a study that focused on data in those additional markets might offer somewhat different findings.

³ These were areas of interest defined by our sponsor, the Office of the Deputy Under Secretary of Defense for Industrial Policy.

National Defense Markets: A Disciplined Diagnostic of Market Access Barriers. This study employs a “quantified judgment” methodology for assessing market access in the eight national defense markets under study which combines: 1) quantitative measures where data is available; and 2) qualified judgments based on our analysis of underlying country policies and behaviors, taking into account available academic literature, relevant government documents and the several hundred interviews we conducted with government, industry, military and academic representatives during the course of this study.

Specifically, for seven selected European nations and the United States, we have identified and evaluated a series of market access metrics that measure the tariff and non-tariff barriers to foreign firms participating in these markets. The “non-tariff” metrics really focus on the classic market access impediments that the United States has addressed with our trading partners in the context of commercial markets; we have tailored these criteria to the unique characteristics of defense markets.

The relevant criteria include: 1) the degree of open and competitive procurement in national defense markets and the transparency of the procurement system; 2) the degree to which nations establish domestic content requirements; 3) the use of offset and *juste retour* practices, unique defense practices described below; 4) the degree of openness to foreign investment in domestic defense firms; and 5) the role of export controls in the defense market.

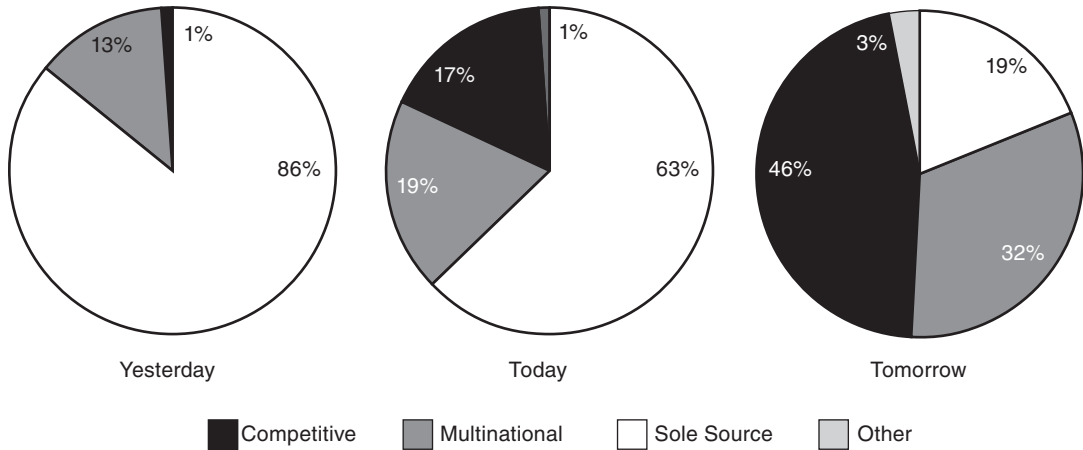
In evaluating the degree of competition, we have relied on DOCSOL’s data, which shows actual awards made on major programs in these countries in the last three years (2006–2008). While we would have preferred a longer time series, this is the best data that was available to use.

National Defense Markets: An Analysis of Outcomes (Measuring Traffic on the Two-Way Street). To validate this analysis, the study then reviews market access “outcomes” for each of these markets—focusing on defense trade and investment flows, the degree of Transatlantic defense cooperation, and the cross-border “footprints of major defense firms and their strategies to cope with market access impediments. In effect, we have examined both cause (the market access barriers discussed above) and effect (i.e., the actual market outcomes—how much of a two-way street exists).

The Emerging European Role in Defense Markets. In evaluating the degree to which emerging European (as distinct from national) laws, rules, policies, practices and arrangements will create fortress-like tendencies, we also utilized a set of qualitative metrics, described below, that focus on: the prospect of European as distinct from “national” European demand emerging; the likelihood of further European defense industrial consolidation; and the implications for the United States—i.e., most notably, whether the shift from national to European buying will result in the creation of a distinct European preference in buying (or “Fortress Europe” tendency).

Market Access Realities: Continued Impediments But Gradually Better and More Open Buying Habits

As set forth in detail in Chapter 3, there have been material and gradual changes for the better in the United States and most of the European countries studied.

Figure 2 European Markets: Yesterday, Today and Tomorrow

Source: Analysis based on Documental Solutions data.

The Evolution of European Defense Markets: More Open and Competitive Markets But More Challenging for U.S. Suppliers

Specifically, Figure 2 highlights the evolution that is underway in European defense markets:

- **Yesterday.** In the past, European nations predominantly purchased weapons systems on a sole source national basis—with little competitive procurement (mostly in the UK), some cooperative procurement among European governments and considerable sole source purchases of U.S. equipment. Ironically, in the old world, European nations bought more from the United States on a sole source basis than from each other, in circumstances where the United States had a leading capability.
- **Today.** The present European market shows a decline in sole source procurement from national champions as well as from U.S. firms, increased European cooperative buying, and increased competitive buying by European governments.
- **Tomorrow.** The future, as reflected in the pattern of buying in recent European awards on major programs, points to a world of even less sole source buying, increased competition to obtain better value solutions, and continued European cooperative buying driven by the economic reality that national programs are becoming unaffordable.⁴

⁴ The charts in Figure 2 are illustrative only and are designed to provide a rough estimate of three snapshots in time. All three charts are derived from our analysis of Documental Solutions data showing major program awards between 2006 and 2008. The “Yesterday” chart is based on analysis of awards in legacy programs (which we believe is consistent with historic norms when these programs were first awarded). The “Today” chart is based on an analysis of all awards (legacy and new) during the period, and data for the “Tomorrow” chart is based on an analysis of awards on new programs only during the period. Other available information also confirms the historic realities (i.e., the Yesterday chart). For example, European national authorities have typically exempted approximately 90 percent of defense procurements from the existing EU procurement directives, which generally require publication of opportunities and competitive bidding. See European Commission, *Communication from the Commission to the Council and the European Parliament on the results of the consultation launched by the Green Paper on Defence Procurement and on the future Commission initiatives*, p. 3 (Brussels, June 12, 2005) (626 final). Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52005DC0626:EN:NOT>.

These European trends are evolutionary in nature; change in defense markets is inherently slow because defense programs, by their nature, tend to last many years. Some 60 percent of spending on major defense programs in the European countries examined between 2006 and 2008 was for “legacy” programs (i.e., programs where the initial award for development and/or procurement were made at some point in the past). The heavy emphasis on legacy systems is not surprising and reflects the long development and production cycles of major defense programs. Poland and Romania were the only exceptions to this trend. Having scrapped most of their old, Soviet-designed equipment in favor of modern, NATO-compatible systems, only about a fourth of their defense spending is dedicated to the upgrading and maintenance of legacy systems.

Not surprisingly, the lion’s share of contracts awarded on legacy programs—approximately 85 percent—was awarded to national contractors on a sole source basis. The magnitude of sole source buying reflects the realities of large defense programs. Since the original program award was made years ago (either on a sole source basis, typical in continental Europe, or on a competitive basis, more typical in the UK and the United States), practical economic considerations mean that follow-on production, sustainment and modification work will in all likelihood be awarded to the original incumbent contractor. Indeed, it would be uneconomical to change contractors midstream on large programs unless the incumbent is not performing (although subsystems and certain upgrades can and should be competed).

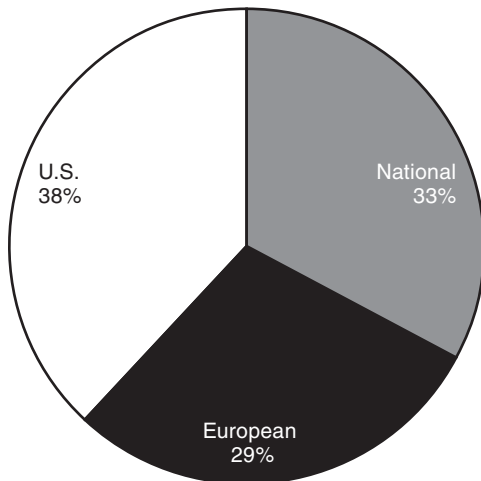
Thus, even today the incumbent “national champions” on legacy programs in the European countries reviewed continue to receive a very sizable percentage of *all* major program awards (whether awarded on a sole source, competitive or cooperative basis). Specifically, during the period reviewed, Airbus/EADS received approximately 60 percent in France, BAE Systems received 46 percent in the UK, Finmeccanica received 70 percent in Italy, Saab received 24 percent in Sweden, and EADS/Thyssen received 44 percent in Germany.

However, analysis of *new* major European major defense procurements (i.e., of non-legacy systems) in recent years in the countries studied clearly shows a changing reality away from this historic norm of protected national markets toward more open and competitive buying. Specifically, approximately 50 percent of awards made on *new* major defense programs (by value) in the European countries examined between 2006 and 2008 were sourced competitively, with non-national suppliers winning the competitively sourced awards approximately 73 percent of the time. This new pattern is in stark contrast to the historic, primarily sole source, norm.

European “Demand” Dynamics, While Constructive in Nature, Are Likely to Favor European Solutions and Disadvantage U.S. Firms. Overall, these developing trends, if sustained, can produce efficiencies and better value buying in Europe. Paradoxically, however, the evolving “demand” dynamics in Europe are potentially detrimental to U.S. firms in multiple ways:

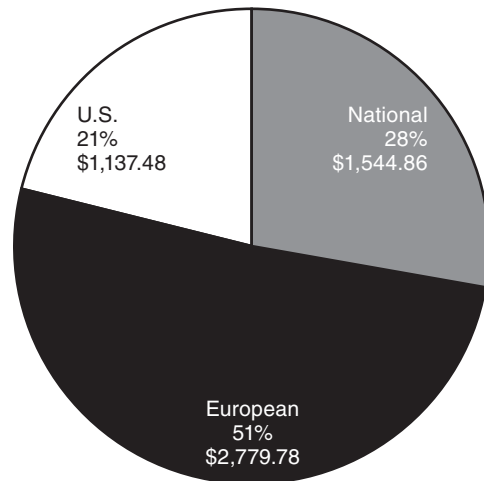
- **Fewer Sole Source Awards.** The increased competition in Europe—generally a good thing—means a decreased use of sole source awards, where American firms have derived significant sales (roughly \$2.1 billion during the 2006-2008 period). And, in competitive procurements, U.S. firms must face increasingly robust solutions offered by other European and third-country (especially Israeli) suppliers.

Figure 3 Total European Competitive Procurement Awards, 2006-2008



Source: Analysis based on Documental Solutions data.

Figure 4 Total Competitive Procurement Awards in Continental Europe, 2006-2008



Source: Analysis based on Documental Solutions data.

- A European Preference in Competitive Buying.** In the growing number of competitive procurements held in European countries studied, there is evidence of an emerging European policy preference and Eurocentric buying pattern. This is reflected in national procurement policies that suggest that some of the “competitive” procurement will be open only to European firms and closed to the United States. This is also reflected in recent award data on new major programs competed in 2006-2008 (Figure 3), which shows that approximately 62 percent of all new European competitive awards (by value) went to European firms and 38 percent went to U.S. firms. The 62 percent in total to European firms, when disaggregated, includes approximately 29 percent inter-European buying (awards to non-national European firms) and 33 percent sales to national firms. The trend is even more pronounced when looking at continental Western European countries (see Figure 4), which shows that most competitive awards (79 percent by value) went to European suppliers in total, with only 21 percent to U.S. suppliers. *Thus, the data clearly shows an emerging track record of openness to inter-European buying—a new and important development. At the same time, however, it suggests that programs ostensibly open and competitive are not really always open to American solutions.*
- Increased Cooperative Programs with Limited U.S. Opportunities.** The documented growth of European cooperative procurements over the years, driven by the increasing inability of national governments to go it alone in major procurements, can result in less fragmented markets and more efficient allocation of resources. Unfortunately, however, the continued application of longstanding *juste retour*⁵ policies to these programs means that participating governments negotiate

⁵ As discussed in detail in Chapter 3 below, *juste retour* (just return) is the prevalent European policy whereby national investment in a cooperative program is proportional to the national procurement work share of the system under development.

work share agreements among themselves that allocate work to national firms on the basis of investment of each country. With no competition on these programs and work share assigned by agreement, there are few opportunities for U.S. firms.

- **The Impact of U.S. Defense Trade Controls.** Finally, as discussed below, the behavioral shift in Europe toward “designing around” or designing out components or subsystems regulated by the ITAR has a particularly adverse impact on U.S. subsystem and component suppliers.

A key mitigating factor is the degree to which European nations will really apply a European “preference” in practice when faced with capable, already developed U.S. offerings that are more affordable—especially during wartime. This is an area where European geopolitical and economic aspirations for an autonomous defense industry may run into economic realities and immediate operational requirements. In this respect, there will likely always be some room in Europe for U.S. offerings when economics drives buyers to the “best value” mousetrap, or when short-term operational needs dictate the purchase of an off-the-shelf capability.

European Supply Dynamics May Disadvantage U.S. Firms. On the supply side of European markets, the dynamics also appear to be increasingly unfavorable to U.S. participation. These include informal European restrictions on foreign investment in defense firms in some countries that have led to a relatively Eurocentric consolidation in Europe and the creation of large, largely European defense conglomerates that compete with U.S. firms. The existence of these large, primarily European defense firms creates powerful incentives for European governments to favor these firms in their procurement decision-making (reinforcing the European preference noted above) in order to maintain a robust European supplier base.

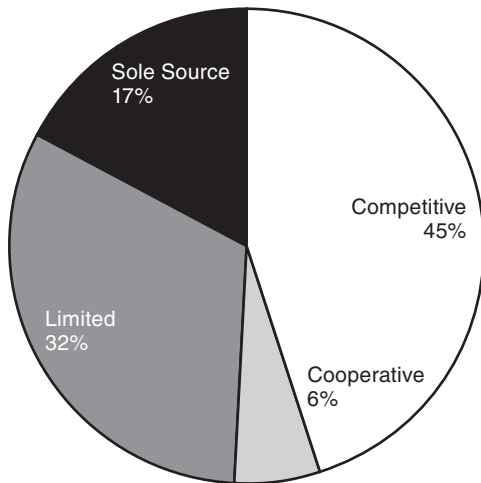
The combined effect of these European market dynamics is particularly of concern for U.S. subsystem suppliers. U.S. subsystem suppliers cannot for the most part participate in cooperative programs and are being disfavored in competitive procurements to the extent they utilize ITAR-controlled components and technologies. While it is difficult to quantify these effects, it is clear that U.S. subsystem firms will likely be at a considerable disadvantage.⁶

The Evolution of U.S. Defense Buying: Somewhat More Open With Continued Challenges for Foreign Suppliers. In contrast to the challenges increasingly faced by U.S. firms in Europe, the future prospects in the United States for European firms appear somewhat more appealing.

The United States has a long history of competitive procurement (it is the default position under U.S. law and policy) but not necessarily of “open” procurement. Historically, foreign suppliers have often been *excluded* from competition through formal and informal means for a variety of reasons, including:

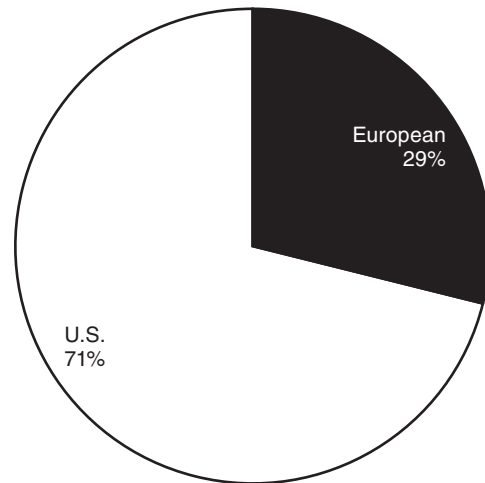
⁶ A recent study of the impact of ITAR on the U.S. space industrial base shows precisely this type of effect. Based on survey data collected from U.S. subsystem suppliers, the report confirms that U.S. subsystem suppliers are facing difficulties in European and other foreign space markets due to U.S. export control policies and the resulting efforts by European and other governments to design around ITAR-controlled subsystems and components. See *Briefing of the Working Group on the Health of the U.S. Space Industrial Base and the Impact of Export Controls*, Center for Strategic and International Affairs (February 2008), p. 10 (“Export controls are adversely affecting U.S. companies’ ability to compete for foreign space business, especially the second and third tier. And it is the second/third tier of the industry that is the source of much innovation, and is normally the most engaged in the global marketplace in the aerospace/defense sector.”) Available at: http://www.csis.org/media/csis/pubs/021908_csis_spaceindustryitar_final.pdf.

Figure 5 Total U.S. Defense Procurement Awards by Type, 2006-2008



Source: Analysis based on Documental Solutions data.

Figure 6 New U.S. Defense Procurement Awards by Nationality



Source: Analysis based on Documental Solutions data.

- national security (especially the risk of accessing sensitive information and control of vital security assets by a foreign-owned entity);
- security of supply (i.e., the risk inherent in relying on a foreign supplier whose host government could choose to restrict supply in a time of exigency); industrial base considerations; and
- a simple aversion to foreign solutions (the “not invented here” syndrome).

Thus, in numerous situations, major platform awards have been made through “limited competition,” with only invited suppliers allowed to compete and foreign firms excluded one way or another.

However, the traditional attitudes are changing, and there is increased evidence of “openness” to foreign sources of supply at the prime level. As shown on Figure 5, a review of recent *new* U.S. procurements on major programs in 2006-2008 shows that 45 percent of awards were made through full and open competition, with 32 percent made through limited competition (excluding foreign sources). The remainder was sole source (17 percent) and cooperative procurement (6 percent).

This changing reality of U.S. procurement is also reflected in other tangible evidence. As shown on Figure 6, some 29 percent of new awards on major U.S. programs that were competed actually went to European suppliers (typically, as one of the lead suppliers on a team with other U.S. suppliers).⁷ This data reflects recent awards on the LUH, the Marine One presidential helicopter, and other programs; the recent award of the tanker program (not included in the data) also is indicative. Additionally, a number of leading foreign suppliers

⁷ As discussed in Chapter 14, this data does not include products produced by U.S. subsidiaries of foreign firms in the United States (e.g., offerings of a firm like BAE Systems North America).

we interviewed indicated that U.S. procurements are increasingly open to their participation—with fewer blanket exclusions than in the past. Moreover, the major foreign defense firms, with an increasing U.S. onshore presence and classified facilities, are also better positioned to enter the market in the future than they were in the past.

To be sure, significant challenges exist in the United States for European suppliers. As discussed below, these include institutional and cultural constraints, the sheer complexity of the U.S. market, the costs of entry and security-driven measures. The risks of additional Buy American legislation and similar actions during the ongoing economic downturn and the failure to reform defense trade controls also are key factors that can undermine our ability to collaborate with our allies.

Further, as defense budgets tighten due to our growing fiscal imbalances and competing economic needs (e.g., the recent stimulus package), some DoD programs are likely to be cut. It remains to be seen whether programs that have large European value-added elements will have the domestic support to be sustained. For example, both the Marine One presidential helicopter program (Lockheed/Finmeccanica) and the tanker program (Northrop Grumman/EADS) involve Transatlantic teams with European platforms at their core that were sufficiently meritorious to prevail over domestic competition.⁸ It is uncertain whether such programs with significant foreign content can be maintained in today's economic context in lieu of programs more national in character.

Globalization Can Drive Change But Government Policies Matter

In the long term, broad societal trends and fundamental economics tend to encourage the current trend toward “better value” buying (i.e., more procurement competition, buying for security needs rather than social goals, and seeking “best value for money”). These factors, working together, may drive the Transatlantic defense market's evolution toward open, competitive, and cooperative buying on the demand side and Transatlantic supplier globalization on the supply side—all of which should foster greater innovation and affordability.

The key drivers of this change include:

- Globalization of the broader economy—while protected sectors like defense change last, they will and are coming (witness the gradual evolution in textiles and steel, two other protected sectors in which markets have gradually opened over time);
- Defense market economics—as noted above, the combination of significant budgetary constraints (expected to worsen in the current global financial crisis) and the rising costs of weapons systems;
- Increased reliance on commercial technology and products in defense systems and the global supplier base that supports such commercial technology;
- Constantly changing military requirements in an era of asymmetric and low intensity warfare and the innovation required to meet those changing and significant demands;
- In Europe, defense firms face powerful incentives to broaden their markets and participate in the large U.S. market in light of the existence of small national markets with limited demand that can no longer sustain “national” champions; and

⁸ The Marine One Presidential helicopter was a program designated by Secretary of Defense Gates for cancellation on April 6, 2009, due to cost overruns and other programmatic problems.

- The need for force interoperability (including meeting NATO standards) to facilitate coalition warfare.

Market Access Impediments: Assessing Their Significance

However, the reality today, and in the short-to-medium term, is that a series of complex and interrelated market access barriers—embedded in government laws, rules, policies and practices—serve as a drag on the development of an open and competitive Transatlantic defense market.

Which market access impediments are most significant? Traditional tariff barriers are of minimal significance in the defense arena. Also, as discussed above, most of the nations studied are gradually opening their markets to allow at least some increased foreign competition in procurement programs. Thus, more subtle non-tariff barriers are becoming increasingly important and are likely to grow in importance in the future. Specifically, based on the disciplined diagnostic analysis we have conducted, the key market access impediments to an open and competitive Transatlantic defense market include the following:

1. **Domestic Content Rules, Informal Domestic Work Share Requirements, Offsets and *Juste Retour*: The Drive to Spend at Home.** This genre of market impediments reflects a truism worldwide: governments, at their heart, still face powerful incentives to spend their defense research, development and procurement dollars at home to the extent possible. Government conduct in this arena is driven by a desire for domestic employment, access to technology and the economic strength it can create, the maintenance of industrial capabilities, and a desire for operational sovereignty over key systems. Thus, they adopt varying practices to achieve these goals.
 - European governments, for their part, do not maintain formal domestic content or “buy national” rules. However, they achieve the same goals through some combination of formal offsets, informal and implicit work share requirements (where in some cases market participants offer work share knowing its importance without even receiving a government request), and the longstanding practice of *juste retour* on European cooperative programs.
 - Formal offsets remain high and prevalent in Europe, and are particularly high in small nations like Sweden or in Central European nations like Poland and Romania. More informal work share requirements are increasingly prevalent in larger defense markets such as France, Germany, Italy and the UK, including requiring high-level “noble work” to be done at home, teaming with a domestic partner, or production of key systems at home.
 - Finally, as noted above, the continued use of *juste retour* principles—even if on a more global rather than program-specific basis—on European cooperative programs effectively forecloses participation by U.S. firms in this growing segment of European defense spending.
 - In contrast, the United States does have Buy American and related domestic content rules. While the most onerous of these rules are waived for nations with reciprocal procurement memorandums of understanding (MOUs) (i.e., all countries studied except Poland and Bulgaria), they still are a factor in defense mar-

kets. While the United States does not impose offset requirements of any type, informal domestic work share requirements of one type or another have traditionally been prevalent (and/or foreign firms presume such requirements exist).

2. **Export Controls: ITAR as a Market Access Barrier and the “Design Around” Trend.** Over more than a decade, one study after another has highlighted the problems inherent in U.S. export controls—notably the ITAR. While the specifics of these ITAR issues are beyond the scope of this study, the impact of ITAR on the Transatlantic defense market relationship is not. Market participants, U.S. and foreign, consistently report that ITAR slows the speed of obtaining licenses needed for sales and collaboration, limits the release of U.S. technology, creates business uncertainty, and generally makes the process of Transatlantic defense industrial cooperation difficult. Fairly or not, most European governments are concerned about relying on ITAR systems and subsystems because they potentially limit their operational autonomy over major systems (especially in real-time crises), introduce program delays and risks, and curtail their export flexibility for systems with U.S. components.

Years of European talk of “designing around” or “designing out” ITAR have now begun to translate into action, according to market participants—with increased evidence that U.S. ITAR policies and practices, for better or worse, are limiting opportunities for U.S. firms competing in Europe (especially at the subsystem level). This is increasingly true even among our staunchest allies.

The ITAR also inhibits U.S. firms from working with foreign firms on domestic U.S. programs and creates challenges for foreign firms seeking to enter the U.S. market. By declining to release certain information on technologies, the acquisition community can effectively preclude foreign participation.

While strong and well-enforced export controls are an important tool of U.S. national security, it is clear that the U.S. failure to address these concerns will curtail the extent of Transatlantic defense technology sharing, defense cooperation and the development of an open and competitive Transatlantic defense market.

3. **Foreign Investment and Government Ownership of Defense Firms.** In an era where firms can “buy” into foreign commercial markets globally through mergers, acquisitions and joint ventures, restrictions on foreign investment in defense assets have been a limiting factor on both sides of the Atlantic.
 - **The United States, with very little government ownership of defense assets, has a mixed record on foreign acquisitions of U.S. defense firms but has nevertheless allowed foreign firms to “buy” into the U.S. market in a variety of ways.** Despite relatively restrictive U.S. investment policies (for most countries other than the UK), European firms have nevertheless bought into the market and have significant foreign ownership of U.S. defense assets (although the total under foreign control is still relatively small in percentage terms). UK firms have achieved substantial presence primarily through larger acquisitions, and firms from other European nations studied have largely achieved presence through a combination of smaller acquisitions, collaborative activities with domestic firms (joint ventures, licensing arrangements and so forth) and the establishment of greenfield manufacturing operations (which are exempt from U.S. government review under applicable laws).

- **In Europe, Poland, Sweden, Romania and the UK are relatively open for U.S. investment while Germany, France and Italy are considerably less open.** Of course, in Poland, Romania and Sweden, the opportunities are fewer in light of the smaller size of the markets. In Poland and Romania, investors also face the unavailability of attractive properties—most of which are state-owned—and difficulties in reaching agreements. In Germany, France and Italy—three of the larger markets—there have been virtually no meaningful U.S. acquisition of defense firms and no meaningful U.S. ownership of significant defense assets. These realities may reflect to some extent the lack of U.S. interest in acquiring defense firms in these markets in light of the limited market size and other commercial considerations. Yet, the lack of U.S. industrial presence also reflects the continued role of governments in ownership of defense firms in Italy and France and relatively inhospitable policies toward U.S. investment in defense firms in all three countries. These policies are consistent with longstanding continental European fears of dominance by large U.S. defense firms. Hence, European leaders have periodically spoken of seeking Transatlantic mergers of large defense firms only on equal terms—i.e., only when inter-European consolidation is largely complete and “balance” can be achieved in Transatlantic arrangements.

4. Domestic Corruption and Foreign Payments. In the United States and in Western European countries studied generally, there is a strong internal commitment to the rule of law; internal bribery and corruption are relatively rare. Not surprisingly, Romania, and to a lesser extent Poland, scored lower because the commitment to the rule of law is less developed and the potential for corruption is therefore increased, although there is no specific evidence that it is directly undermining their defense markets. In third-country markets, however, corruption has long been and remains a considerable factor; there continue to be instances of Western suppliers making illicit payments to government customers. This practice creates market distortions in global defense markets, with customers choosing solutions on the basis of factors other than best value and firms rewarded based on illicit practices rather than innovative solutions. Illicit payments also undermine democratic institutions and the rule of law. While the United States has a relatively strong track record and regularly prosecutes firms for illicit payments, in Europe there continues to be a mixed track record with respect to government tolerance for, and business firms’ propensity to make, illegal payments in third-country defense markets. The recent Siemens settlement of bribery charges in Germany and the United States has brought more attention to the issue, and European defense firms are taking enhanced steps to ensure compliance with national anti-bribery laws.

U.S. Market Access: Unique Challenges. With respect to the large U.S. defense market, one major factor constraining foreign participation is the depth and breadth of American technological capability relative to foreign competitors. With smaller budgets at home and less funds for research and development (R&D), foreign firms lack competitive offerings in some areas. Of course, this is not true across the board and European and other foreign firms do have appealing capabilities and niche products of interest to the United States. In areas where European firms do have competitive offerings, there are several special market access impediments that appear most significant and were consistently reported by defense firms from virtually all of the European countries examined. These factors, some of which do not fit neatly into the market access metrics we have utilized, include the following:

- **The Need for a Better Widget.** European firms universally report that, based on their experience, they must have a better product than is currently available in the United States for successful market penetration. Having “distinctive” capabilities or “daylight in capability” between their offering and those of American firms was, in their view, a threshold prerequisite for competing in the U.S. market. Typically European firms have succeeded where they already have a developed niche subsystem capability that was not available in the United States at the same quality or capability level.
- **The Complexity of the U.S. Defense Procurement System and Sizable Investment Needed to Penetrate.** The U.S. defense market, with its many components, poses a significant knowledge and cost barrier to non-U.S. companies. A firm seeking sales must often have contact with and prove a product’s capabilities to multiple defense communities, including, among others, the user community, the requirements community, the acquisition community, and the prime contractor in the case of subsystems. Numerous foreign companies (especially small and medium ones) believe it is not worth the effort to access the U.S. market unless the company has the size and scale to make it worthwhile and can afford the potentially sizable expense associated with penetrating the market.
- **The “Not Invented Here” Syndrome and Institutional Resistance to Change.** On both sides of the Atlantic, there is an inherent customer bias for domestic sources. This is largely not a matter of law, rules or policies but a matter of customer behaviors (e.g., in the United States, the exclusion of foreign firms from competition). This factor is especially pronounced in the United States given its large, broad and very capable defense industry—government customers tend to think there is little reason to look overseas. Foreign firms stated that biases against the use of foreign products still shape the mindset of numerous U.S. acquisition officials. Foreign firms have also found that U.S. competitors try to play on these existing biases, and in some situations U.S. requirements and acquisition authorities may be seeking to favor known domestic vendors in how they shape requirements and programs. They do note, however, that there appears to be less of this tendency than there was 5 to 10 years ago.
- **Other Barriers Exist or are Likely to Emerge.** To date, issues such as intellectual property (IP) and technical standards have not played significant roles in curbing access to defense markets. However, as traditional market barriers fall, issues such as technical standards are more likely to come to the fore—especially as the EU and individual countries seek to develop their own standards that go beyond those established by NATO.

Evaluating Market Access Impediments: Country-Specific Findings Vary

When the dynamics of each country’s defense market is separately evaluated, key differences do emerge. Based on the market access metrics we developed, we were able to rank order the key markets as follows in terms of their accessibility (to U.S. firms in the case of European countries and to European firms in the case of the United States). Country-specific rankings are set forth on Table 1 and a full assessment of market access in each of the markets studied is set forth in Volume II of this study.

Table 1 Market Access: Normalized Country Rankings

	Weight	France Weighted	Germany Weighted	Italy Weighted	Poland Weighted	Romania Weighted	Sweden Weighted	UK Weighted	U.S. Weighted
Tariff Barriers	0.2	0.15	0.15	0.15	0.10	0.10	0.15	0.15	0.15
Competition in Procurement	1.0	0.45	0.31	0.43	0.66	0.52	0.68	0.62	0.42
Fair and Transparent Procurement Process	1.0	0.80	0.70	0.50	0.60	0.50	0.95	0.95	0.80
Domestic Content Requirements	0.8	0.72	0.60	0.60	0.76	0.76	0.76	0.64	0.52
Offsets and <i>Juste Retour</i>	0.8	0.22	0.16	0.16	0.02	0.21	0.14	0.23	0.80
Government Ownership and Control	0.7	0.46	0.67	0.42	0.35	0.32	0.67	0.56	0.67
Limits on Foreign Direct Investment	0.7	0.42	0.28	0.28	0.49	0.42	0.7	0.49	0.42
Ethics and Corruption	1.0	0.68	0.68	0.60	0.53	0.38	0.90	0.75	0.73
Export Controls	0.7	0.42	0.42	0.42	0.70	0.70	0.63	0.56	0.35
Intellectual Property Rights	0.3	0.27	0.27	0.24	0.15	0.15	0.27	0.27	0.21
Technical Standards	0.3	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Raw Score	7.5	4.82	4.47	4.04	4.59	4.29	6.08	5.46	5.30
Normalized Score (0-1)		0.64	0.60	0.54	0.61	0.57	0.81	0.73	0.71
Normalized National Score		0.79	0.73	0.66	0.76	0.71	1.00	0.90	0.87
Rank Order		4	6	8	5	7	1	2	3

1. Sweden has the most accessible defense market of the countries examined—by a considerable margin—on either an absolute or a comparative basis. This reflects not only its longstanding policies affording market access to American firms but Sweden’s effective implementation of these policies. Sweden has a largely open and competitive procurement system, does not have “buy national” rules or policies, does not have any state-owned defense firms, and has allowed considerable foreign ownership of defense firms. Of all the metrics, Sweden scores poorly only on offsets, which are relatively high on Swedish programs.

- Italy and Romania—with very different legacies—have the most inaccessible markets for U.S. firms—by a fair margin on either an absolute or a comparative basis. One might view as surprising the fact that Italy scores on roughly the same level as Romania in light of their very different internal

circumstances—with Romania still transitioning from its Soviet bloc past and having considerably different defense market conditions. But the similarity in overall grading reflects several factors. First, Romania has made considerable strides in recent years and is essentially playing on a clean defense procurement slate—adopting new Western rules and buying mostly new capabilities on a competitive basis. Second, both countries have a number of market imperfections in common: offsets and continued government ownership of defense firms (albeit to different degrees). Third, the reasons for the lower grades are based on different circumstances in each country, as described below. Thus, on balance, the grading provides a reasonably good sense of where these and the other countries studied stand—keeping in mind that this is not a highly precise, scientific analysis but is designed to give an overall sense of each country’s market conditions and tendencies.

a. Italy: A Market Access Paradox. Italy’s low score—the lowest among Western European countries examined—is somewhat counterintuitive in light of a strong bilateral security relationship, the broad scope bilateral cooperation between the United States and Italy, and significant Italian purchases of U.S. weaponry and ongoing cooperation on the F-35 Joint Strike Fighter and other programs. However, American defense sales to Italy have been largely made on a sole source basis when Italy has had a specific need and chose to buy a developed American capability. In contrast, when a U.S. firm seeks to enter the Italian market as a bidder to compete, the barriers are significant. Teaming with Italian firms (especially Finmeccanica on major programs) is essentially an implied condition for entry to the market. The relative inaccessibility of Italy’s defense market is a reflection of a range of factors: 1) the least transparent procurement system of all the Western European countries examined (with decisions sometimes based in significant part on the impact on jobs rather than on requirements and best value); 2) the lack of a clear policy on whether and when to use competition in making awards (which tends to be decided on a case-by-case basis) and the informal nature of that competition; 3) the continued reliance on considerable sole source buying and relatively less overall competition in major program procurements (although more competition in recent awards); 4) continued significant government ownership of major defense firms (although less than in the past); and 5) sizable offsets.

b. Romania: Evolving New Policies and Implementation Challenges. Romania has put in place new Western style laws and programs, largely scrapped Soviet-era legacy programs, and made changes quickly. And, as noted above, most of its recent procurement awards are competitive, both in absolute terms and relative to other countries. Nevertheless, Romania has a challenged business environment marked by corruption, excessive bureaucracy, and a judiciary that has a mixed record on enforcement of investor rights. It is only in the last four years, with changes in government, that Romania has made progress on these issues and it has a considerable way to go. Romania’s defense funding, acquisition and management processes also are works in progress. Romania is not yet ably executing its new acquisition processes due to a lack of defense acquisition expertise and has established a number of unrealistic programs. Hence, the climate for defense trade is still challenging for Western suppliers.

2. The five other countries examined, which fall between the “outliers”—Sweden on the one hand, and Italy and Romania on the other—all have significant, but somewhat different, impediments to market access and their scores fall within a fairly narrow range.

a. The UK and the United States fall at the top of the range.

- i. The **UK** has a long history of open and competitive procurement. However, its new defense industrial policy and actual practice walk back subtly from that posture in several respects. First, the UK now balances competition with more focus on partnerships for long-term sustainment programs for major platforms. Second, the UK has put increased focus on operational sovereignty, which signals its increasing concern over reliance on ITAR-controlled capabilities. Third, the UK now encourages foreign firms to undertake more onshore activities in order to be considered part of the “UK” defense industry, including IP creation and noble work, onshore manufacturing capability and local jobs. In effect, this new “onshore” industrial policy is an offset requirement with a velvet glove. U.S. firms and other foreign firms seeking to compete in the UK market—especially at the prime level—need to develop a domestic presence and/or substantially partner in the UK to compete.
- ii. In contrast, while the **United States** has a competitive and transparent procurement system, it is less open to foreign participation than the UK, as discussed above. Nevertheless, in the context of the wartime “bull market” in defense acquisition, foreign companies *have* seen significant growth in U.S. sales and market penetration since 2003. The United States has allowed European participation in some key programs recently and has allowed foreign firms to “buy” into the U.S. market through acquisitions, collaborative arrangements and the establishment of greenfield manufacturing operations.

b. France, Poland and Germany (listed in order of their scores) are clustered together but each has a relatively unique set of circumstances and is moving in a somewhat different direction. France and Poland are trending toward a more open environment and better buying practices, but Germany appears to be wedded to the traditional approach.

- i. **France**, historically considered a relatively closed market, has adopted new pro-competitive policies within the last five years and has taken steps to open its system to competition and adopt more modern acquisition strategies; there also is anecdotal evidence of increased competitive sourcing. However, available data on recent major program awards does not yet reflect this change (i.e., there is a lag between policy and performance). The data on awards instead shows a high percentage of sole source awards, as in the past, and a new focus on buying “European” through cooperative programs. This is consistent with France’s emerging Eurocentric policy, which in effect replaces a traditional Gaullist strategy with a neo-Gaullist pro-European approach. France also continues to have significant ownership stakes in large segments of its defense industry, has offset require-

ments in practice, and has not been receptive to U.S. ownership of any sizable French defense firms.

- ii. **Poland** scored surprisingly high given that it has been in the throes of transition and continues to own a sizable percentage of their defense firms and has a business environment with challenges that are a product of its Soviet-era legacy. Nevertheless, the scoring reflects how far Poland has come since the fall of the Berlin Wall in 1989. In a macro sense, Poland made many changes in its economic and security policies years ago—with radical reforms—and has effectively implemented many of these changes. Poland is now a full-fledged member of the EU and NATO and has a fairly good overall environment for trade and investment. In a defense-specific sense, Poland's moderate scores also reflect that it has put in place new laws and programs on defense acquisitions (drawing from European models), largely scrapped Soviet-era legacy programs, and made changes quickly. Thus, since Poland has less desire to continue purchases of legacy equipment, most of its recent procurement awards are competitive both in absolute terms and relative to other countries (which continue to rely to a greater degree on legacy programs). However, Poland's defense market has considerable remaining impediments, including high and rigid offsets and a sense that buying decisions are in part a product of the size of the offset package rather than the best value.
- iii. **Germany** scores similarly to France but there is little evidence of a forward-looking trend toward openness. There continues to be a significant amount of sole source national buying even on new programs. On those major defense programs that are competitively awarded, most awards went to German or other European suppliers, with little openness to U.S. offerings. U.S. firms also note that they must partner with German firms to have any real chance of participating in German procurements. Germany also has adopted one of the most restrictive policies in Europe with respect to U.S. acquisitions of German defense firms. On the other hand, Germany's tradition of private ownership of defense firms has materially affected its score in a salutary manner. Germany's defense industrial policy is marked by tensions; while in favor of creating a more European industry Germany continues to seek to protect domestic suppliers in a "low demand" environment.

Defense Market Outcomes—Measuring Traffic on the Two-Way Street

Chapter 4 evaluates market "outcomes"—trade and investment flows, the degree of Transatlantic armaments cooperation, and the developing footprints of U.S. defense firms in Europe and of European defense firms in the United States. By and large, this data tends to confirm and complement the market access findings summarized above and set forth in detail in Chapter 3.

An Analysis of Trade Flows

The defense trade flow between the United States and Europe remains very unbalanced—one side of the street has a good deal of traffic while the other has very little, in absolute or percentage terms. Not only do U.S. exports to Europe dwarf European exports to the United States (the ratio is roughly 5:1 or 6:1), but the U.S. market share in Europe is much greater than the European share of the U.S. market. However, U.S. companies by and large do not depend as heavily on exports as do European companies and have retained a dominant position in the global defense market, with 51 percent market share in 2007. In short, while Europe accounts for a large portion of U.S. defense exports, Europe is not critical to the health of the U.S. defense industry.

The data also shows a bulge in U.S. defense trade to Europe in the 2004-2007 period that appears to relate to European buying for immediate operational needs (spares, upgrades, additional equipment). This surge in U.S. sales to Europe during wartime, which is probably not sustainable, confirms that European governments, whatever their political preferences, will buy American equipment (often on a sole source basis) when urgent needs dictate. This suggests that the future U.S. participation in the European market may be more in the context of special buying for short-term operational needs rather than in the context of ongoing, long-term European programs.

On the other hand, for European defense industries, which depend on exports for more than half of their total revenues, the United States is emerging as a critical market because: 1) their own domestic markets continue to decline; 2) other European markets remain stagnant or in decline; and 3) the European market share in the global defense market continues to decline. Because the United States remains the single largest defense market in the world, European companies need to penetrate the U.S. market to survive. Thus, in this context, their willingness to deal with various impediments to U.S. market access is wholly understandable.

Finally, the data on U.S. defense trade with Europe also shows that U.S. defense firms have historically had the most success on the geographic periphery of Europe—the UK, Greece, Italy, Turkey and increasingly in Central Europe. This reflects a combination of geopolitical considerations, the availability of very competitive U.S. offsets and financing packages for sales, and the relative superiority of U.S. offerings. The analysis here indicates that this reality is unlikely to change. As Western European nations in the heart of Europe open their markets and introduce better buying habits, the opening is unlikely, as discussed above, to benefit U.S. suppliers as these governments increasingly adopt a more Eurocentric approach. Moreover, as American firms face more competitive offerings in the periphery of Europe, it is likely that our position in these markets will be under stress as well (although we have not explicitly studied some key periphery countries such as Greece and Turkey).

An Analysis of Transatlantic Content on Major Programs and Cooperative Engagement

Our assessment of U.S. participation in major European programs confirms the paradox discussed above: European defense procurements, while becoming more competitive, are becoming less open to U.S. participation:

- First, due largely to budgetary constraints, the number of major European programs initiated each year has fallen from an average of 5 or 6 per year in 1995-96 to only one or two per year today. Europe's sustained procurement holiday reduces the opportunity for U.S. companies to compete in the European market. Moreover, the dearth of new starts has created incentives for European customers to keep any new programs as "European" as possible.
- Second, of those competitively awarded European programs ostensibly open to U.S. participation, the win rate for U.S. competitors is low; only a few have been won by U.S. prime contractors.
- Third, a review of major cooperative European programs, which have grown as a percentage of European defense spending, shows a limited U.S. presence on those platforms. U.S. companies at best participate in supplying limited subsystems and components.

An "outcomes" analysis of European participation in U.S. programs also confirms the obvious: European firms have a small share of U.S. prime level procurement awards and an even more minor role in U.S. RDT&E programs. At the subcontractor level, we believe European participation in the U.S. defense market is deeper and more varied. However, meaningful data on subcontractor sales in the United States is unavailable.

Moreover, there is very limited Transatlantic armaments cooperation underway (with F-35 Joint Strike Fighter accounting for most of the effort). The small list of joint programs offers no overriding strategic purpose or plan such as the general promotion of force interoperability. Rather, it is a hodgepodge of programs that, for various reasons at various times, were undertaken cooperatively.

The limited number of Transatlantic cooperative programs reflects several other underlying factors on both sides of the Atlantic. First, in the United States, the absence of DoD leadership support for cooperative programs means that DoD components will seek this alternative only if they really need to (e.g., in order to lower costs per unit or obtain needed funding from foreign partners, as in the case of the F-35 Joint Strike Fighter). Given the large budgets in the United States in recent years, there has been less motivation for services and program offices to seek foreign participation in a cooperative program. In Europe, small defense budgets are in fact driving armaments cooperation—but primarily European cooperation in light of geopolitical considerations. Finally, the relative lack of enthusiasm on both sides of the Atlantic reflects not only underlying geopolitical and budgetary realities, but the sustained practical problems we have encountered in these programs (with issues of budgets, technology transfer, cost and the like).

An Analysis of Foreign Direct Investment

A review of foreign direct investment in defense firms in the markets studied also tracks with the market access analysis above. The pattern of European acquisitions over time reflects changing U.S. policies. There were more significant acquisitions in the Clinton years when U.S. policy favored these Transatlantic supplier linkages, and fewer in most of the Bush years when a series of things, including September 11, the U.S.-European rift over Iraq, and the controversial Dubai Ports acquisition, created a less hospitable environment for foreign investment. Thereafter, there was an increase in foreign investment activ-

ity in the late Bush years when U.S.-European relations improved and U.S. attitudes toward foreign investment somewhat relaxed.

- Most of the European acquisitions were subsystem firms and suppliers with only a scant few acquisitions of prime level firms (all by UK buyers).
- Consistent with the “special” relationship between the United States and the UK and the deep bilateral defense industrial cooperation, British firms made the lion’s share of all acquisitions (nearly 50 percent). Finmeccanica of Italy’s 2008 acquisition of DRS Technologies, a leading electronics subsystem firm, was the only significant non-UK acquisition of a U.S. defense firm.

The data on U.S. acquisitions of European defense firms also is consistent with our findings of foreign investment policies in European countries—i.e., that France, Germany and Italy are largely not hospitable to U.S. acquisitions of defense firms, while the UK was reasonably hospitable. Significantly, the data shows that only 19 percent of U.S. acquisitions of defense firms in Europe were in the three largest continental European countries studied despite the fact that France, Germany and Italy hold the bulk of Europe’s defense industrial capacity outside the UK. In contrast, consistent with its more open policies toward U.S. investment in the defense sector, the UK was the home of 70 percent of the U.S. acquisitions in recent years.

An Analysis of Transatlantic Defense Industrial Footprints—Examining the “Icebergs”

Finally, the footprints of U.S. firms in Europe and of European firms in the United States also track well with our market access analysis. Among European firms, the UK defense firms have the largest U.S. presence—consistent with the special U.S.-UK relationship, longstanding defense industrial collaboration, and a greater degree of U.S. openness to UK ownership of U.S. defense assets. Continental European firms, faced with a less favorable climate for acquisitions in recent years (especially larger ones), have expanded their U.S. presence through smaller, less sensitive acquisitions and other approaches. In contrast, U.S. firms have a modest, but growing, presence in the UK and a very limited presence in continental European firms—reflecting both different market opportunities and different foreign investment policies in the relevant countries.

Are the defense industrial “icebergs” described above melting? Significantly, there is little doubt that European firms are becoming more integrated into the U.S. defense industrial base in ways not previously seen. In contrast, the European prime level firms (i.e., the “icebergs”) largely remain European—more integrated across national lines but with little integration with large U.S. firms. There are, however, a series of linkages between U.S. and European primes, formed largely through teaming arrangements and a limited number of joint ventures.

An Analysis of the Coping Mechanisms of Defense Firms. Not surprisingly, defense firms have adopted different coping mechanisms to deal with this complex market environment. European firms, with small home markets, have long recognized the imperative to participate in global markets and have increasing percentages of revenues from non-home markets in recent years. Nearly all of the major European firms seek enhanced participation in the U.S. market, the largest market in the world. Recognizing the difficulty in selling

directly to the DoD, they seek to participate through acquisitions of U.S. defense firms, joint ventures, partnerships and other collaborative mechanisms that typically involve considerable U.S. domestic production. Large European firms have increasingly become multidomestic (with sufficient local capability to be considered a domestic player in relevant markets) and seek to include the United States as another home market.

In contrast, in an era of large U.S. defense budgets, large U.S. firms have not viewed international markets as anywhere near as important to their business as their European counterparts do (with revenue from foreign sales running at 20-30 percent of total sales at the large U.S. firms). They perceive fewer opportunities abroad, risks of loss through fixed-price contracts (more prevalent in Europe), long program gestation periods, potential national and European preferences, and more complexity. Hence, they tend to operate abroad through local representatives and agents and compete opportunistically except in the UK, where the availability of opportunities and openness have caused several large U.S. firms to make sizable investments. As U.S. budgets remain flat or decline, U.S. firms may again look to deepen their engagement in Europe and elsewhere.

The Role of the EU and Other “European” Arrangements in Defense Markets—Realities, Prospects and Implications

As discussed in Chapter 5, there is no doubt that the role of “Europe” as a whole—as distinct from individual national governments—is growing in defense and homeland security markets through the EU and other collaborative European arrangements.

The Role of the LOI 6

On the supply side of the market, post-Cold War budget drawdowns drove European nations to actively encourage the consolidation of defense industries within Europe. In this context, six European nations constituting a large share of European defense spending (the LOI 6) have signed a Letter of Intent (LOI) and put together a series of arrangements that are designed to ease anxieties over cross-border mergers, acquisitions and collaborative efforts. These arrangements served their purpose and ushered in an era of largely European industrial consolidations—especially in the aerospace sector. The various LOI agreements also established a number of standards now gaining traction in the larger EU, and the LOI 6, as a forum, itself has been useful for the development of the European market.

The Emerging Role of the EU in Defense and Security

More broadly, Europe is coming together in defense—in fits and starts—through the EU and is developing an overall defense identity separate from the individual national defense identities. Over the next 10 to 15 years, as the EU increasingly becomes the center of gravity for European defense in all its elements (from strategy to capabilities to missions), we project the EU will play a growing role in the establishment of European defense requirements and capability development. Gradually, an increasing amount of European research and technology and procurement will be spent through the EU and smaller groups of European nations often under an EU umbrella.

The Growing Role of EU Institutions in Defense Markets

A series of EU institutions are becoming active in defense markets — on both the demand and supply sides of the equation:

- The EDA will increasingly be a shaper of requirements for, and potentially a buyer of, both defense and homeland security products and services where common needs exist.
- The EC is becoming the leading regulator to ensure an open and competitive European defense market, as reflected in its new package of defense-related directives—the EC Procurement and Transfers (export licensing) Directives. The Directives, recently passed by the European Parliament, are expected to be finally adopted in 2009.
- The European Court of Justice also has made a series of rulings related to defense markets that effectively restrict the ability of national governments to invoke Article 296 of the Treaty establishing the EC (Article 296 EC Treaty) and exempt defense procurements from competition on the grounds of “essential security.”

The New EC Procurement and Transfers Directives: A Constructive Development for Europe, A Mixed Blessing for the United States

The enactment of the new EC Defense Directives is a major milestone for the Commission, which has long sought to create a single European defense market rather than a series of fragmented national markets. The EC Defense Procurement Directive applies the basic market principles of the EC’s existing Public Procurement Directive, including transparency and competitive bidding requirements, to defense markets. But the Directive recognizes the unique and sensitive nature of defense markets and, hence, affords more flexibility to contracting authorities and also provides safeguards designed to ensure the security of information and supply.

The EC Transfers Directive is expressly designed to create an improved and simplified regulatory environment for intra-European defense transfers that both strengthens the European defense industry’s competitiveness and improves security of supply of European defense products. The Directive seeks to accomplish these goals by creating broader and less burdensome *internal* export license mechanisms while maintaining clear, strong controls at EU external frontiers.

Significantly, virtually all parties interviewed for this study agreed that the most important aspect of the new Directives is that they have the force and effect of law and can be judicially challenged. All believed that the prospect of judicial challenge, if not its actuality, will gradually force more discipline on the part of Member States and, over time, result in a more open and competitive European defense market. Thus, if some governments fail to fully apply the Directives and continue to seek to protect their markets, they would be subject to judicial action.

While the enactment of these Directives and the development of a truly European defense market is a constructive step forward, they do hold some material risks for the United States. Specifically:

1. **The increasing use of competition in national defense procurement, which the new EC Defense Procurement Directive is likely to accelerate, will likely make it harder for U.S. firms to obtain sole source contracts in Europe.** As noted above, U.S. firms historically won a sizable number of awards on a sole source basis. Now, through Brussels, European firms can pressure national governments to open these awards to competition. Perversely, U.S. defense firms will likely be major beneficiaries of individual national governments' continued willingness to invoke Article 296 EC Treaty to buy on a non-competitive basis from the United States (e.g., to fill urgent needs).
2. **More broadly, as Europe comes together in defense, there is a very real risk that a European preference to "buy European" will develop and gradually substitute for existing "buy national" tendencies prevalent in Europe today.** This potential "Fortress Europe" risk may manifest itself in European countries limiting some national competitions to European bidders. This risk is driven by a mix of nationalist and protectionist impulses present in some quarters in Europe, including a desire for autonomous European security policies and defense industrial capabilities as a counterbalance to perceived U.S. hegemony and a desire to create more "balance" in Transatlantic defense trade. While not all in Europe share these more protectionist motivations, some nations and constituencies are strongly advocating these approaches.

The new EC Defense Procurement and Transfer Directives do not contain an express European preference and, indeed, make clear that it is up to national authorities whether to allow non-EU firms to compete in their defense markets. EC officials stressed to the study team that the Directives are designed to facilitate the development of a more integrated European market but are neutral on U.S. participation in that more integrated market. However, the Defense Procurement Directive in particular has a number of features that in effect create potential implicit European preferences. These include, among other things, security of supply provisions allowing European nations to disfavor bidders that rely on ITAR-licensed products as compared to other bidders with a wholly European supply chain. The ability of national procurement authorities to use "security of supply" as a discriminator in contracting could well be, or evolve into, a disguised market access barrier in practice. How the security-of-supply rules are implemented by national governments remains to be seen.

Similarly, a core question for the future is the relationship between the Defense Procurement Directive and the existing bilateral defense MOUs between the United States and various EU Member States, which contain varying types of national treatment requirements. Specifically, will EU Member States afford the benefits of the EC Defense Procurement Directive to the United States, and will the United States continue to maintain the MOUs in place in the absence of true "national treatment" being afforded to U.S. suppliers?

Implications for U.S. Policy and Recommendations

The reality today is that neither the United States nor Europe (collectively or as individual nations) have put in place a coherent set of strategies to encourage the development of a more open and Transatlantic defense market.

- For legitimate reasons, European nations are primarily focused inward on creating a more open and competitive *European* market—an imperative given constraints on

European defense spending and well-known market fragmentation and duplication. European governments also are driven to cooperative programs due in large part to economic circumstances—the lack of ability to go it alone. However, a range of factors are driving European nations to *European* armaments cooperation rather than *Transatlantic* cooperation.

- In the United States, the Clinton Administration, especially in its last years in office, actively pursued the development of an open Transatlantic arms market—primarily through a focused “supply side” policy of encouraging Transatlantic supplier globalization to promote force interoperability and competition in defense markets, and to remove incentives for arms proliferation (through U.S. and European competition) in third-country markets. Specifically, the United States took a number of steps to put in place the “hardwiring” for supplier globalization.
- In contrast, the Bush Administration, with a different focus in the post-September 11 era, was largely agnostic, or in certain circumstances hostile, to this agenda. While the Bush Administration continued some Clinton Administration initiatives, in essence, for its eight years in office, it had no clearly articulated defense industrial policy or policy on supplier globalization or armaments cooperation. In the early years, its approach ranged from non-activist to quasi-protectionist. Nevertheless, after a number of years of a “circle the wagons” approach in the immediate post-September 11 era, a series of Bush actions in more recent years has been promising. These include the negotiation of export control treaties with the UK and Australia (following from the ITAR waivers negotiated during the Clinton Administration), the award of several major contracts to Transatlantic teams and the approval of a large non-UK defense firm’s acquisition of a U.S. defense firm (Finmeccanica’s purchase of DRS Technologies). The Bush Administration also deserves credit for working actively to fight off the prospect of more protectionist Buy American legislation.

In short, the historic record shows that Administration policies matter and do affect the scope and pace of the Transatlantic defense marketplace. Thus, the threshold question for the Obama Administration and our European Allies—faced with many other challenges before them—is whether to take strategic, meaningful action in this arena. Specifically, should we take the steps needed to sustain the positive dynamics underway, eliminate or reduce impediments to change, and foster or facilitate a more rapid development of a Transatlantic market—or leave the matter to gradual, evolutionary change?

Back to First Principles: The Linkage Between Transatlantic Market Development and Strategic Policy Goals

Simply put, the central policy question is whether enhanced mutual market access facilitates arming the United States and its coalition partners with affordable, innovative and interoperable military capabilities designed to address the range of twenty-first century threats?

Under the prevailing “defense paradigm” developed during the Cold War, American security has been based primarily on U.S. military superiority—derived from our technological and industrial edge developed in the cocoon of defense industrial autarky. This paradigm is under serious stress in the post-September 11 security environment we face today. For one thing, the powerful trends at work—the globalization of the economy and

the information revolution—have led to a more interconnected world, where national “beggar thy neighbor” policies do not work to our mutual benefit. Moreover, the broad range of challenges and threats we face—increasingly transnational in character—cannot be solved by the United States alone and increasingly require collective action across all the tools of statecraft, from intelligence to economic assistance to high- and low intensity military power. Going it alone is not an effective option for addressing challenges from economic trauma and cyber power to global terrorism and global warming to weapons of mass destruction.

- In an era markedly different from the Cold War, with agile non-state actors operating across national boundaries, the need to work more closely with allies is not an option but an imperative. Among our allies, our European partners are among our closest partners by virtue of our shared heritages and values, and our congruence of interests.
- In an era when we face a range of potential conflicts abroad and high tempo of operations (especially low intensity conflicts such as counterinsurgency, stabilization and reconstruction and anti-terrorism), it is more important than ever that we share the burden with our allies through coalition warfare. Burden sharing with our European Allies is particularly likely in low intensity operations; by virtue of their history, culture and political evolution, most European countries have little appetite for out-of-area, high intensity operations today. Thus, a more open and competitive Transatlantic market—with both cooperative demand and supply-side supplier integration—is potentially one part of a holistic approach to enhancing coalition capabilities and force interoperability in support of such low intensity missions.
- In an era when weapons costs continue to escalate and defense budgets are increasingly constrained, enhanced Transatlantic competition can help drive affordability and innovation in consolidating U.S. and European defense markets.
- In an era when a good deal of future innovation is likely to come from abroad (e.g. from India or China), we need to take steps to ensure that the United States can continue to access the best and brightest foreign people, ideas and investments in order to provide the best solutions for our war fighters and maintain our competitiveness.
- In an era when Europe is developing its own defense identity, an integrated Transatlantic defense market can be part of the broader spectrum of ties that continue to bind us together.

Finally, and not insignificantly, enhanced market access can strengthen and expand our own defense industrial base. Foreign sales—running 20-30 percent at large defense firms—are not unimportant to their bottom line. They can enhance economies of scale and lower the per-unit costs of systems and products for the DoD. Moreover, coming at the end of production runs, they often have good margins and benefit the bottom lines of defense firms. Such sales also are probably more important to U.S. subsystem suppliers, but little data is available to confirm this inference.

In light of these considerations, there remains a strong case for developing an open and competitive Transatlantic defense market—with closer defense and homeland security industrial cooperation among a circle of close allies subject to appropriate security safeguards.

Some Lessons Learned

If the Obama Administration and our European Allies pursue this agenda, there are several important “lessons learned” that should be taken into consideration.

1. **Developing an open and competitive Transatlantic defense market is not an easy task, requires senior leadership attention, and will inevitably be evolutionary in nature.** Since, as discussed above, governments have powerful incentives to spend their resources at home, it requires substantial leadership attention to change the existing culture. Moreover, the nature of the resistance to change is such that it will take time to change deep-seated cultural and institutional attitudes—a matter of years not months. One lesson from the Clinton years—when major reforms were initiated during the last two years of the President’s second term—is that this type of paradigm shift needs to be started earlier in the Administration in order for it to really produce results.
2. **Developing an open and competitive Transatlantic defense market requires concerted efforts on *both* the supply and the demand side of the market; supplier globalization alone is not a panacea.** Experiences over the last two Administrations indicate that progress can be most effectively made through a series of interrelated actions. Put another way, supplier globalization—the development of enhanced defense industrial linkages among allies—cannot alone be an effective tool in the absence of a more open market on the demand side that will entertain offerings from such globalized firms. There is little point in urging Transatlantically linked firms to come forward with bottom-up solutions that promote interoperability and coalition war fighting capability acquisition unless the buyers are willing to entertain such solutions. Moreover, achieving the goals of interoperability and capability acquisition cannot be done through bottom-up supplier offerings alone. More attention is needed to create a demand pull in support of these goals to complement the supplier push.
3. **Finally, the United States needs to fully accept and embrace the reality of an EU with a significant role in defense generally and in defense markets in particular—with an emerging role as regulator and buyer.** Thus, any new strategy should have as a core element deepened and broadened engagement with the EU, as well as the LOI 6 and European national governments, in order to better shape the evolving development of European defense markets in ways salutary for U.S. interests.

Recommendations for Change

Specifically, as set forth in the body of the report in detail (Chapter 6), there are six core recommendations for actions that can help facilitate the development of an open and competitive Transatlantic defense market.

1. **Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development and Globalization Agenda.** The current Pentagon organizational structure related to this agenda is balkanized in a variety of ways, which undermines our ability to effectuate our strategic policy goals. DoD export control functions are dispersed among different DoD

components and are not well connected to our armaments cooperation functions or our efforts to improve coalition capabilities. Moreover, there is not a clear focal point at the DoD for incentivizing our allies' capability acquisition and promoting force interoperability—the critical enablers of coalition warfare. Because of these relatively stove-piped functions and policies, the DoD has struggled to assimilate to a globalizing world. Accordingly, the disconnects between coalition warfare planning, international armaments cooperation and technology transfer policy can potentially be addressed by creating an organizational structure that brings these capabilities together under one senior DoD executive who can facilitate making balanced, holistic decisions.

2. **Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development.** The DoD should develop a more coherent, across the board approach to armaments cooperation to replace the current ad hoc approach and organize a concrete set of programs that advance our interests in coalition warfare. Specifically, the United States should develop interoperability roadmaps for NATO coalition forces and should use these as a basis for cooperative engagement. In particular, a cluster of efforts could be focused on cooperation with respect to low intensity warfare, which typically requires the development of capabilities that are lower tech in nature in some cases and also does not involve large platforms (where protectionist tendencies are greatest). These efforts also could draw more attention to better harnessing technology for low intensity conflict.
 - Thus, the United States should consider, among other things, joint programs or foreign participation in key U.S. enabling programs on network-centric warfare (including technology demonstrators) in order to facilitate force interoperability with our key allies—a serious need that has been largely left unattended. Such programs could 1) focus on fostering the development of common network-centric architectures into which nations can “plug and play,” 2) incorporate their own sensor outputs, and thereby 3) achieve secure communications, similar levels of situational awareness and other potentially higher-order forms of interoperability as needed.
 - The United States also should consider cooperative efforts—joint investments—with the EU in defense and homeland security (e.g., in the area of civil/military interoperability). With this approach in mind, the Obama Administration should seek to work cooperatively with Congress to amend the Arms Export Control Act in order to afford the DoD the authority to enter into cooperative R&D agreements with the EU; today, such agreements can be signed only with individual governments or NATO.
3. **Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Industrial Security, National Disclosure Policy, Procurement, Investment, and Buy National Tendencies.** As discussed above, an emerging confluence of U.S. policies and practices—some intentional and others unintended, some old and some new—together threaten to impair our access to foreign innovations, as well as defense markets, and impede our collaboration with foreign partners. These policies and practices, over time, can put at risk American industrial leadership in critical industries and our national security. The danger is real and should be addressed

now before the damage is severe and we are doomed to be “second best” and see our defense posture and competitiveness erode. Accordingly, the Obama Administration should consider giving guidance to the federal government departments and agencies to administer the various regulatory regimes—investment, trade, export controls, Buy American, immigration—in a more balanced manner that regulates these matters only to the degree needed to protect national security and bring more focus to competitiveness considerations.

- **Conduct ITAR Review and Adopt Needed Defense Export Control Reforms (Release Policies And Processes); Consider Merging Export Control and National Disclosure Regimes.** Virtually every interview we conducted highlighted U.S. defense trade controls as a “barrier” significantly impeding Transatlantic cooperation and the evolution of a Transatlantic defense market. Numerous studies, including some by the Defense Science Board (which is tasked to advise the DoD), have pointed out the problems inherent in our export control system. Accordingly, the time for study is past.
 - The United States should reform our ITAR rules, policies and practices with a view toward a balanced approach that safeguards those technologies, products and systems that warrant protection but allows release to our close allies in order to develop a more open and competitive Transatlantic defense market and promotes interoperability among coalition forces. Changes are warranted in both our procedures, which are too complex and arcane, and our release policies. *Allowing greater release of technologies and technical information for low intensity warfare should be a priority and should pose fewer challenges than sensitive information relevant to high intensity fighting.* Undoubtedly, however, not all of the complaints of foreign governments and firms are accurate or can be remedied. And, at the end of the day, significant U.S. technologies do warrant protection. However, there is no denying the legitimacy of some of these concerns.
 - The United States should move to ratify the U.S.-UK and Australia export control treaties signed in 2008—these agreements contain a new model for technology sharing among a community of trusted friends.
 - The United States also should reform related national disclosure policies that pertain to the release of classified information. These policies today inhibit our ability to engage in coalition warfare and also undermine defense industrial collaboration. One option to consider is the merger of national disclosure and export control regimes—they are really two sides of the same coin.
- **Modernize U.S. Foreign Ownership, Control and Influence (FOCI) Mitigation Arrangements to Allow More Business Synergies and Lower the Costs of Doing Business While Maintaining Security.** The basic mitigation agreements being used by the DoD where foreign firms acquire FOCI of U.S. defense firms with classified contracts were developed decades ago and have not been modified to adapt to twenty-first century business models now in place. While foreign firms with U.S. classified operations have learned to live with the inflexible arrangements that exist under today’s U.S. industrial security rules, they nevertheless impose significant administrative costs and burdens beyond

what is necessary to protect security in some situations and limit the ability for business synergies and the innovations that may result. Accordingly, the DoD should conduct a review with a view toward adopting a more flexible approach that nevertheless maintains security and revising the National Industrial Security Program Operating Manual accordingly.

4. Put in Place the International “Hardwiring” for an Open and Competitive Transatlantic Defense Market: Engage on a Sustained Basis With the EU and LOI 6 and Revitalize the Bilateral Declaration of Principle (DoP) Process.

The United States should more comprehensively engage with Europe (all counterparts) with a view toward addressing market access impediments, easing insecurities, and “leveling up” standards and harmonizing practices in areas such as: market access, industrial security, export controls, procurement, R&D, the development of the defense industrial base, offsets, security of supply and technical standards. A U.S. willingness to share more technology with our allies inevitably is tied to their willingness to enhance their own security standards *vis-à-vis* third parties.

- **The EU: An Early Focus On Avoiding the Development of a European Procurement Preference in the Implementation of the New EC Defense Procurement Directive.** The DoD should engage with the EU and national governments to ensure that the new EC Defense Procurement Directive and any other new rules or policies on European acquisition are effectuated in a manner consistent with existing international trade law principles on government procurement and U.S. interests, and are not interpreted so as to create a “European preference.” In particular, the dialogue should focus on the “security of supply” measures in the Directive, which suggest that ITAR-based products in a supply chain of a bidder might be viewed as “insecure” and, therefore, put that bidder at a competitive disadvantage *vis-à-vis* other bidders with no ITAR-based products in its offering. The United States should signal that the adoption of European preferences, explicitly or implicitly, would be viewed as contrary to our existing reciprocal procurement MOUs and could result in the possible termination of such MOUs.
- **The LOI 6: Offsets, Domestic Work Share Requirements (Formal and Informal), Industrial Security and Intellectual Property.** On offsets, a key market access impediment, the United States should build on efforts to date and develop a sustained dialogue with the LOI 6 and other like-minded countries (Australia and Japan) with a view toward developing disciplines and limitations on the use of offsets and informal domestic work share requirements that have emerged—perhaps phasing them out over time. While prior periodic multilateral consultations (including those with the LOI 6) have not produced tangible results on offsets, a reinvigorated effort may lead to disciplines that become stronger over time in the context of discussions with more like-minded countries rather than in a broader group that includes countries that are predominantly buyers (especially those in transitional countries in Central Europe). In the areas of industrial security and IP, in order to level the playing field and facilitate cooperation, the United States should explore mutual recognition agreements and ways to harmonize practices with the LOI 6 nations as a group. The LOI agreements in place on these issues can serve as a point of reference.

- **National Governments: The United States should reinvigorate and revitalize the bilateral DoP process begun in the late 1990s by the DoD, and seek specific agreements in key subject areas with DoP partners on a country-specific basis in order to broaden mutual market access.** The focus should be on priority countries where U.S. strategic interests are greatest. With this close circle of friends, we should consider the possibility of negotiating broadened market access agreements that address priority issues that pose the greatest impediments: foreign investment, offsets and performance requirements. The approach would be to make more tangible the benefits of DoP membership and incentivize countries to change their policies and practices so as to get the benefits of these expanded market access benefits.
- **Addressing Security of Supply Anxieties Through Interdependence.** In undertaking this range of discussions, the United States should directly discuss with its European counterparts “security of supply” anxieties—a central issue hindering the creation of an open and competitive market. European concerns over this matter are very real—as manifest in inter-European LOI agreements designed to address these issues. While agreements on some aspects of “security of supply” (e.g., a priority allocation process for times of exigency and peacetime) can perhaps create some degree of comfort, this is an area where conduct and practice are probably more important. The reality is that sovereign governments of course retain the right to deny supply to other governments. Indeed, the U.S. government could not commit legally to cede these rights, which exist as a matter of law, and also would be unwilling to limit its flexibility in this manner. European governments thus should recognize that dependence does not necessarily imply vulnerability in today’s age of increased security cooperation. In fact, the best salve is growing *interdependence* and cooperation—with step-by-step confidence-building measures—which can in practice, over time, create more comfort on these issues. Thus, as a Transatlantic market develops, with more cooperation and competition, this type of concern should gradually ease as trust and confidence grow.

5. Shape Demand-Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector. Western suppliers will continue to face pressures to make illicit payments from government buyers in transitional and developing countries. The reported prevalence of bribery and corruption in the military sectors of developing countries in Asia and South America and in transitional countries of Central and Eastern Europe reflects deeply rooted and systemic problems. While the United States and other Western governments have taken action to address the “supply” side of this problem through the adoption of the Organisation for Economic Co-operation and Development (OECD) Convention on Combating Bribery of Foreign Public Officials in International Business Transactions and national criminal laws prohibiting foreign bribery, there have been limited steps overall on the “demand” side of the equation. There also has been little specific focus on these issues by DoD or by Defense Ministries in Europe. The achievement of meaningful results in stopping the practice will require more systematic efforts to curtail the demand for corrupt payments by addressing the underlying institutional problems noted above and the perverse incentives they cre-

ate. The United States therefore should work with its allies to develop a more robust demand-side agenda to address payments in the defense sector.

6. **Create a Transatlantic Defense Industrial Dialogue to Catalyze Change.** Governments alone by no means hold all of the answers, and private sector engagement and action is an important part of creating a more open and competitive Transatlantic defense industry. To this end, one approach to consider is the creation of a Transatlantic Defense Industry Dialogue (the Dialogue) among senior executives of the U.S. and European industry and senior government leaders, including representatives of NATO, the EU, and the national governments involved in the “Five Power” armaments group (France, Germany, Italy, the UK and the United States). The Dialogue could potentially be a vital force in helping to catalyze the types of policy changes set forth in the recommendations above and in promoting private sector solutions and collaboration in the context of a secure environment.

The Bottom Line

In sum, the development of a more open and competitive Transatlantic defense market can be a potentially useful policy tool for solidifying the Transatlantic relationship, facilitating coalition war-fighting capabilities, and improving affordability and innovation in defense acquisition. However, as the list of recommended actions above reflect, deepened Transatlantic defense industrial cooperation will not be easy to achieve—it goes against the basic grain of national governments not to protect their strategic industries and to spend their R&D and procurement dollars at home. It also requires changing laws and rules and breaking down longstanding institutional and cultural impediments.

Further, for progress to be made, it is critical that both the United States and our European Allies engage constructively with respect to this agenda. If Europe (both the EU and its members) decides as a strategic matter to focus largely inward on fostering its own European market development—a fair prospect—it will not be possible to make material progress on this agenda.

Finally, it should be recognized that Transatlantic market development is no panacea standing alone. It will not automatically result in greater force interoperability or improved coalition war fighting or greater weapons affordability. This is only one piece of a larger mosaic, with other steps beyond the scope of this report, that together can help to achieve these strategic goals. And, this strategy will be effective only when both sides of the Atlantic really care about the underlying security and economic goals discussed herein. Both sides must be willing to apply scarce leadership resources to address the difficult underlying impediments and shift the paradigm from national defense industrial policy toward a Transatlantic defense industrial policy among a community of trusted friends.

VOLUME I

Study Findings and Recommendations

Chapter 1

The Study Context: The Unique Realities of the Defense Marketplace

It is important to understand the fundamental demand and supply dynamics that operate in defense markets in order to assess the accessibility of such markets. First, as we discuss, there are significant macro-level changes affecting the industry—the broadening nature of defense demand and the changing budget context. Second, at a more micro level, the nature and structure of the defense market—how buying works—is truly unique and shapes the contours of this study.

I. Macro Drivers of Change in the Defense Market

The Broadening of the National Security Industry

Historically, the output of the defense industry was dominated by large platforms like naval vessels, military aircraft and tanks. To be sure, a significant portion of U.S. and European defense spending today still reflects the investments made in the last two decades in these large platforms and systems programs. And, today’s existing platforms are likely to be major factors for years to come. Indeed, this study, at the request of our sponsor, primarily focuses on the classic defense market sectors that include these platforms, such as aircraft, ships and submarines, ground vehicles, missiles/munitions and C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance).⁹

Today, however, the market is considerably broader due to changes in the nature of modern warfare and technology that have altered emerging military procurement priorities—with concomitant implications for market access. The key dynamics causing a shift in demand for defense products include:

- **The Shift Toward Network-Enabled or Network-Centric Warfare.** There has been an increased market for defense electronics needed to link sensors to command centers and “shooters” at all levels of the battlespace. This new thrust, known as C4ISR, includes advanced defense telecommunications, data processing and fusion, and a wide range of related defense electronic offerings as well as information gathering in the form of intelligence, reconnaissance and surveillance.
- **Enhanced Focus on Low Intensity Conflict.** American superiority in high intensity warfare has increasingly driven our adversaries to asymmetric responses and low intensity war fighting, including counterinsurgency, urban warfare and asymmetric warfare of various types (chemical and biological weapons, cyber warfare, etc.). Terrorists and other non-state actors have been able to use available commercial technologies to develop and evolve new threats and adjust to our defensive capabilities—requiring that we continually innovate and evolve our countermeasures. Thus, today the military requires a wide range of products and services beyond tra-

⁹ These areas of interest were defined by the Office of the Deputy Under Secretary of Defense for Industrial Policy.

ditional platforms, including soldier/warrior solutions (body armor, tactical communications, etc.), chemical/biological nuclear defense, and various other offerings to address these new threats emanating from agile enemies.

- **Outsourcing of Services.** There has been a significant shift in the United States, the United Kingdom (UK), and increasingly in continental Europe, toward the outsourcing of defense services, which include: 1) systems engineering and technical support services to support defense acquisition program offices; 2) maintenance, logistics and facilities operations; 3) training of various types; and 4) a broad range of information technology-related services. Increasingly, defense services include activities associated with military operations. In some cases, the “services” industry includes a mix of bundled products and services (particularly in the information technology arena).
- **Homeland Security.** There is an increase in acquisition of homeland security products and services that in many instances are also provided by the same group of suppliers that provide defense offerings. A number of defense systems and subsystems, such as Unmanned Aerial Vehicles (UAVs) and small naval vessels, are readily applicable to this market. Other offerings such as airport security are related to defense capabilities as well. This broadening of the market adds new government customers (coast guards, customs services, and the like) and effectively means that yesterday’s defense industry really is today a broader “national security” industry.
- **Defense Innovation and Shift to Commercial Standards.** Finally, there has been enormous and broad ranging technological innovation—resulting in unmanned platforms of various types (land, air and sea), far more precise munitions, advanced space-based solutions, stealth technology and a range of other innovative systems and products that have changed the nature of warfare. There also has been something of a shift toward reliance, where possible, on commercial standards, solutions and components—although the shift is by no means consistent and varies from one product market to another.

While our analysis of traditional defense sectors and newer sectors such as C4ISR programs capture some of these changes, the data available to us has not allowed us to capture the full range of these new market dynamics. However, they are important as a context in thinking about the future accessibility of defense markets.

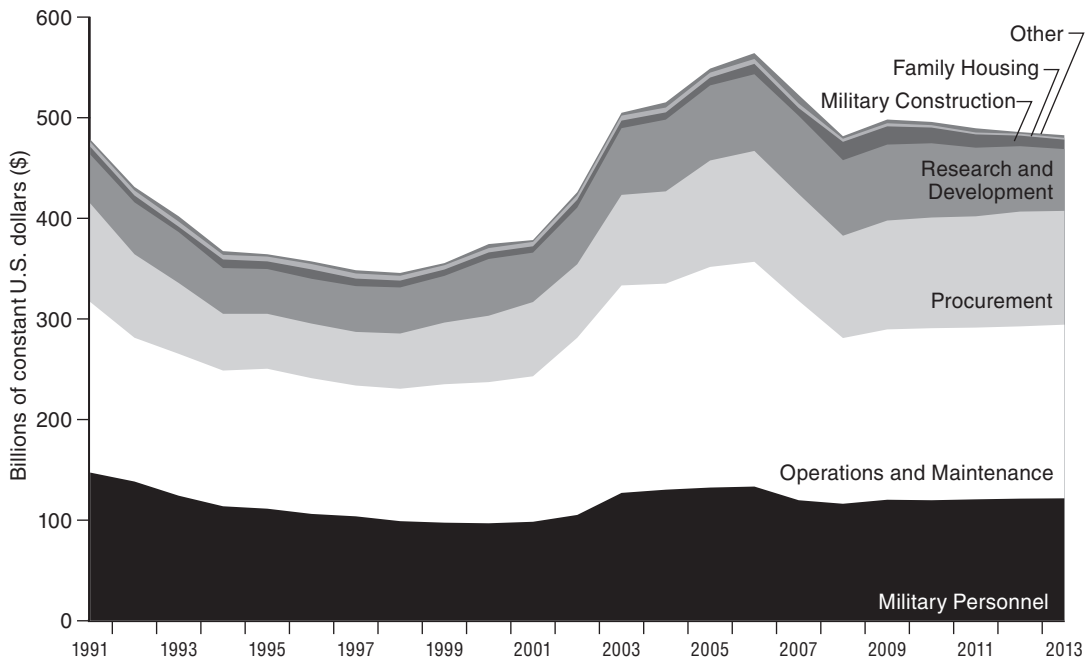
Constraints on Future U.S. and European Defense Spending: A Major Driver of Change

There are several important “macro” economic realities that fundamentally shape the defense market and access to it.

Significant U.S. Budgetary Pressures Are Likely to Constrain Defense Spending Accessible to Industry.

After a significant post-Cold War decline in defense budgets, the U.S. defense budget rose considerably during the Bush Administration—especially after September 11, as shown in Figure 7. Moreover, as the United States commenced operations in Iraq and Afghanistan,

Figure 7 U.S. Defense Spending, 1991-2013

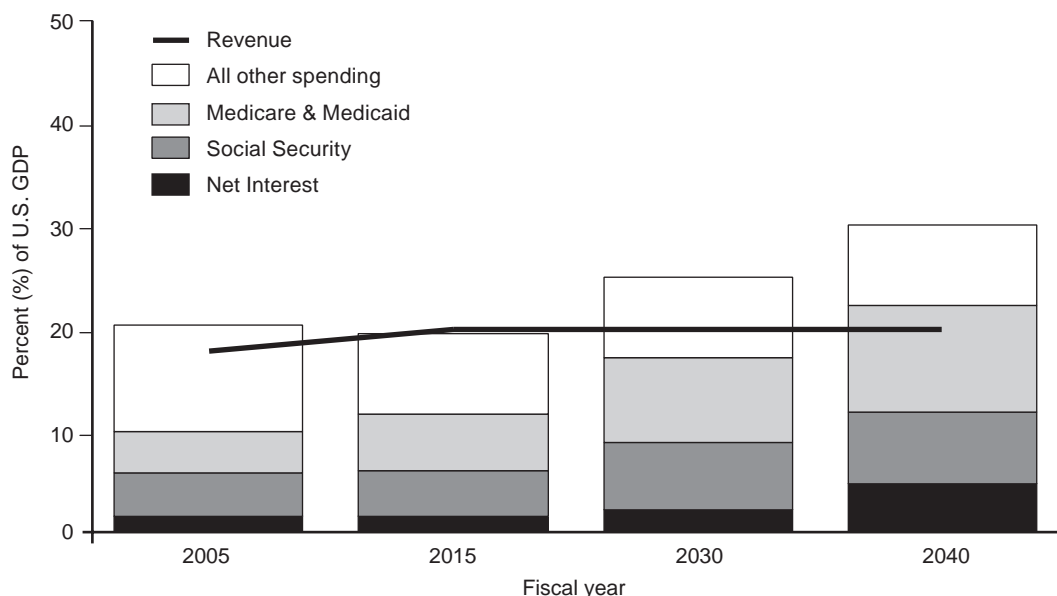


Source: Department of Defense, President's Biennial Budget Submission, FY 2008.

we also spent considerably on these operations through supplemental appropriations (i.e., in addition to the core defense budget).

With the end of the Bush Presidency, however, there is a growing consensus that total U.S. defense spending will likely flatten or modestly decline for a number of reasons:

- **Macro Level Budget Constraints.** First, the defense budget's top line will likely be constrained by the rise of domestic entitlements as a percentage of the overall budget (see Figure 8), competing domestic fiscal needs, the enormity of our fiscal imbalances, and the large budgetary outlays associated with the recent financial crisis. Not surprisingly, the Obama Administration already has scaled back the planned 2010 Department of Defense (DoD) budget from the proposal left behind by the Bush Administration—keeping the total core DoD budget at 2009 levels.
- **National Security-Specific Constraints.** Second, a number of other factors specific to national security spending are likely to make the budget problem that much more challenging and limit the DoD funding available for the defense industry.
- **Need to Bolster Civilian National Security Capabilities.** There is a growing consensus that there is a pressing need to enhance the civilian elements of our national security capability. Yet, where will this funding come from? While the allocation of funding across all accounts is not necessarily zero-sum, some portion of it is likely to come from the DoD budget.

Figure 8 Entitlement and Discretionary Funding vs. Government Revenues

Source: GAO's May 2006 analysis. See also www.gao.gov/special.pubs/longterm/.

- Migration of Core Spending Into Supplemental Funding.** While it is common to think of our supplemental appropriations for Iraq and Afghanistan as funding wartime operations, the fact is that a good portion of this spending really is for core budget needs such as the acquisition of unmanned vehicles, Marine Corps maintenance and the like. Thus, even assuming a significant drawdown in Iraq, some portion of the spending formerly in “supplementals”—especially spending on acquisition programs—will likely be migrated back into the normal budget.
- The Fixed and Escalating Nature of Many DoD Expenditures Will Limit Spending in the DoD Investment Accounts.** Finally, the relatively fixed and escalating nature of DoD expenditures in a number of budget categories—military personnel, health care, housing, and operations and maintenance (O&M)—will undeniably put enormous pressure on more discretionary defense budget accounts such as Research, Development, Testing and Engineering (RDT&E) and Procurement. These are the accounts used to fund DoD's defense acquisition programs—i.e., the accounts, in addition to operation and maintenance, that fund the defense industry. Given our sustained level of operations abroad, there is virtually no leeway to cut military personnel (indeed, most proposals call for increasing such personnel). Given our sustained operations, our projected O&M expenses are probably materially understated in our budget planning projections.

Sustained Limitations on European Defense Spending Drive European Cooperation and Defense Industry Strategies. In Europe, post-Cold War defense spending has

remained low as a percentage of gross domestic product and is expected to continue on this trajectory for the foreseeable future.

Despite longstanding U.S. encouragement to spend more on defense, Europe has not to date and is unlikely in the future to adopt this approach. As discussed later in Chapter 5 of this study, much of Europe has largely become “debellicized” or non-warlike; despite September 11 and security threats in Europe, European populations have a more sanguine view of the security threat. Moreover, the European public is more apt to favor non-military approaches. Additionally, overall spending constraints in European constitutional arrangements and the high priority on social spending make increased defense spending highly doubtful.

European spending patterns have significant implications for government and industry, as discussed in Chapters 3 and 4. First, the limited funding available for new programs drives European countries to a greater degree of cooperative engagement. Second, limited domestic spending drives European firms to multidomestic strategies and to focus on the U.S. defense market, the largest defense market in the world. During the post-September 11 defense buildup, a number of European firms have increased their market presence in U.S. defense products—enjoying some share of this “bull market” opportunity set (see Chapter 5).

Sustained Escalation in the Cost of Weapon Systems Adds to the Financial Squeeze.

A second major and indisputable economic factor is the rising cost of weapons systems across the board. In the United States, year after year, the U.S. Government Accountability Office (GAO) has found that major U.S. weapons systems have exceeded projected costs by significant amounts, are considerably behind schedule and produce capabilities that perform less well than promised. In 2008, for example, GAO found cost overruns of \$295 million (26 percent), bringing total costs on planned major programs to \$1.6 trillion.¹⁰ While there are multiple reasons for this (e.g., changing requirements, immature technology, lack of a sufficient cadre of capable program managers) and efforts have been made to improve the results of weapons acquisition programs, the only constant reality is escalating cost.

The combination of these factors—constrained defense budgets and rising weapon system costs—is likely to be a major driver of change in the defense marketplace for years to come. These circumstances are gradually driving national buyers in Europe toward increasingly joint buying to share costs and increasingly “best value” buying to reduce costs. These circumstances will likely drive the United States toward a greater focus on affordability and the need for the competition that fosters it. Thus, these underlying economic dynamics inherently tend to point to gradually more open and competitive defense markets.

While senior acquisition officials often talk about the coming “train wreck” (the mismatch between the costs of the acquisition programs on the books today and likely future budgets), it typically is put off through spending deferrals, program stretch-outs and the like. This time around, the Secretary of Defense is unlikely to have this luxury. Just as greater defense spending in the Bush years allowed hard choices to be deferred, the substan-

¹⁰ Government Accountability Office, *Defense Acquisitions: Assessments of Selected Weapon Programs*, GAO 08-467SP (March 2008). Available at: <http://www.gao.gov/new.items/d08467sp.pdf>.

tial budgetary constraints now in place will likely force the Obama Administration to make truly difficult choices that probably cannot be put off.

II. Unique “Micro” Features of the Defense Marketplace

The Close Linkage of Defense Markets to Sovereignty and National Security

An immutable reality is that defense markets are different from other markets in large part because the “demand” is a function of national security requirements. Defense is essentially the classic “public good”—inherently governmental in nature. Thus, while firms operating on a commercial basis must meet that demand, it is important to understand that national security considerations do critically affect the marketplace, including the ability of firms and people to participate in it.

Moreover, defense industries, funded largely by their governments, have historically been considered “national assets,” with a focus on maintaining their technology leadership and protecting their jobs.

In short, the defense industry is best understood as a “highly regulated” industry where broad public interest considerations are at stake, and where there are inherent constraints on competition imposed by virtue of governmental actions to protect those interests. Thus, not surprisingly, the U.S. government and other foreign governments play unique and dominant roles in defense markets.

The Phases and Levels of Defense Buying

The defense market has numerous points of sale and entry. These include the different phases of a defense product’s lifecycle and the continuum of defense products across the supply chain, from systems of systems at the top to subsystems and components at the bottom of the chain. Market access can vary across these phases and market segments.

Product Lifecycle: Research and Development (R&D), Production and the Aftermarket. Relevant phases of defense product lifecycle are:

- R&D—all phases of development, including early paper studies and analysis, prototype development, systems engineering, demonstration, testing, and full development for production (the early phases of which are often called defense research and technology in Europe, and all phases of which are captured in the RDT&E budget account in the United States);
- Procurement—the manufacturing of developed systems and products (which is captured in the Procurement account in the DoD budget); and
- Sustainment—the aftermarket provision of goods and services, ranging from full upgrades to “lifecycle” or total system support to replacements to maintenance and repairs and upgrades (which is typically captured in either the Procurement or O&M accounts in the DoD budget).

The aftermarket segment has grown considerably in importance in recent years for private defense firms. First, an increasing amount of the lifecycle support work is outsourced; in newer programs, the lifecycle support is now built into the initial acquisition program.

Second, the focus on affordability has resulted in more upgrade and modification programs during the 1990s. Rather than design and buy new systems, defense buyers have sought to husband resources by modifying and upgrading existing platforms. The information revolution and other technology advances also have led to “refreshes” and “technology insertion” programs related to key subsystems on platforms, including software, radar and the like.

In practice, in the United States, the defense industry thus derives revenue from three different budgetary accounts, each with their own parameters: RDT&E, Procurement, and O&M, which, as noted above, generally funds many of the aftermarket services. Most European nations have similar types of budget accounts.

Each of these phases of supply is very different and has its own contours. Generally, from a historical standpoint, R&D is something governments historically keep at home (i.e., they spend their R&D resources on their own defense industrial base and tend not to fund those of other nations for development work).

The acquisition of fully developed defense systems is somewhat more open to foreign access than is R&D—governments in need of a particular capability are often prone to buy an existing off-the-shelf system than to invest in a new development, especially in fiscally constrained times. This has historically created a significant competitive advantage abroad for U.S. firms, with their larger class of advanced offerings derived from the large U.S. defense budget.

Finally, the aftermarket has increasingly been open to private firms. Historically, a large proportion of aftermarket upgrades, servicing and support was handled in-house by the armed services (at depots, arsenals, air logistic centers, naval shipyards, etc.). Increasingly, these O&M functions are outsourced—especially in new system contracts where a government might acquire the system on a full “lifecycle” basis. Historically, upgrades and support work was given to the original contractor for the system, product or service on a non-competitive basis. However, this is changing and this market is increasingly open to competition.

Market Segments: Systems, Subsystems and Components. Another key set of distinctions that affects market access relates to the vertical levels in the supply chain. Different firms have different types of capabilities—from systems to subsystems to components—and sell to different customers.

- **Prime Level Suppliers.** Prime level defense firms, which produce systems or systems of systems (e.g., major air, sea and ground platforms), often serve as the integrators of these systems (buying either the systems themselves or major subsystems from other firms). These firms are typically large in scope and breadth and generally supply complete systems directly to government customers. Historically, the acquisition of systems from prime level suppliers has tended to be more national in orientation and to rely more on sole source contracts than at other levels in the supply chain.
- **Subsystem Suppliers.** Second- and third-tier companies, often called “subsystem suppliers,” supply a wide range of products that are integrated into overall systems—from landing gear to radar to avionics to electro-optics to defense electronics of various types. The subsystems suppliers typically sell their products to prime contractors rather than directly to the government (although the government may

choose to buy certain complex subsystems, such as radars or aircraft engines, directly and provide them to prime contractor as “government-furnished equipment,” or GFE). Thus, access to the subsystem market is somewhat different from access to the system market, with a different range of customers. Subsystem suppliers often are more commercially oriented (for example, providing avionics solutions to both defense and civilian aviation markets). These markets are historically more open to foreign access as the customers, prime level suppliers, seek to provide best value solutions. However, in some cases prime level suppliers also are vertically integrated and produce both systems and subsystems. In such cases, prime level suppliers may face internal pressures to make their own subsystems rather than buy them. Also, in some situations, the prime contractor might face direction from the government customer to acquire certain subsystems from certain (possibly national) suppliers. Obviously, these factors affect the accessibility of subsystem suppliers to these types of opportunities. As discussed in Chapter 2, it is more difficult to obtain meaningful data on subsystem suppliers.

- **Component Markets.** Finally, there is a range of firms that provide semiconductors, transmitter/receiver modules and other components that are typically far more commercially based. These products tend to be more off-the-shelf and less defense unique in nature. This study is primarily focused on the prime level system and, where information is available, subsystem segments of the market, and not on the components market.

The Nature of Competition in Defense Markets

In fundamental ways, defense markets are certainly at odds with Adam Smith’s model of a “perfect” market environment. Briefly, as discussed below, competition in these markets can be characterized by the following dynamics:

- **Multiple Roles for Government Customers.** Governments play multiple, significant roles in the market—as the setter of defense requirements, buyer, regulator, and financier—in shaping the market to meet national security needs.
- **Limited Buyers: Oligopsony Rather Than Monopsony.** While there is a tendency to think of the defense market as a monopsony, with single national buyers, this is increasingly not the case. In the United States, there are multiple DoD components buying various products like fixed wing aircraft, UAVs or radar, as well as intelligence agencies and other specialized departments and agencies (from the Department of Homeland Security and its constituent components like the Coast Guard to agencies like NASA, a buyer of launch services, satellites and payloads). In European defense markets, there typically is a single defense buyer but other ministries may fund development programs or procure intelligence and homeland security products and services. In Europe, there also is the rise of joint programs, with the European Union (EU) as an emerging buyer and Organization for Joint Armament Cooperation as a procurement authority. Finally, in all markets, there are private sector buyers—especially primes buying subsystems and components. Thus, the situation more closely resembles an “oligopsony,” with a limited number of buyers that have significant market power but not total control of the market.

- **Long-Term Bid Model, Fewer Programs, Long Program Life, and Long-Term Incumbents.** There is a bid model of competition, with relatively few, long-term points of competition for awards of multiyear contracts; the post-Cold War budget drawdowns and rising costs of weapons systems have resulted in fewer new programs. Competitive bidding is typically undertaken in the early, development phases of the program, with the eventual down-select of a single winner for production. The upfront costs of carrying multiple bidders through to production are high (and only the United States and the UK do this regularly). In general, however, the longer competition can be maintained in the program, the more resulting cost savings and innovation benefits can be achieved. Moreover, given these pressures and the complexity, cost and technical challenges involved in developing these systems, the contracts, once awarded, can run for many years, up to 30 in the case of major systems. Existing major platforms are likely to be sustained, with modifications, upgrades and life extensions over many years. Historically, follow-on orders for these systems, as well as the aftermarket work, was generally given to the initial contractor on a sole source basis (although this is changing).
- **The Challenges of the Long-Term Bid Model: Managing Incumbents.** As history has taught, achieving best value results—rapidly fielded, innovative and affordable high performance weaponry—is not just a matter of having a competitive bid market for early phases of programs. It also requires addressing the inherent difficulties in managing large, long-term programs with established incumbent contractors that are largely insulated from the types of market incentives that exist in the commercial world. A core question for the DoD has been how to maintain innovation, affordable costs and a timely schedule on programs where the incumbent effectively has a monopoly position for many years (at least for that program). The long-term bid model of competition also creates challenges for losing bidders and other firms seeking market access. Once a firm has won a major long-term contract on a program, it is difficult to displace that firm in practice and few new buys may exist in that market area for years to come. Moreover, the incumbent contractor plays a key role in managing selection of subsystems as the platform is upgraded and “refreshed” from time to time. In general, there is more likelihood of competition in subsystems upgrades and refreshes, but this varies from one customer and program to another.
- **“Best Value” as the Buying Metric.** Unlike many other markets, price is not necessarily the dominant determinant of buying in defense markets. Rather, Requests for Procurement or tenders, as they are commonly called in Europe, set specific requirements for weapons capability, and the winning bidder is typically selected on the basis of a formula that takes into account the technical performance of the product/system being acquired, price, schedule and other considerations. This “best value” buying calculus is a way to take capability into account and not just acquire the lowest price widget. This type of graded decision-making also opens the door to considerable discretion for buyers—discretion that has sometimes been used to take other factors into account that can affect market access (such as the domestic content and jobs associated with a particular bid).
- **Barriers to Entry.** There are significant barriers to entry and other market “imperfections” that are a consequence of the unusual nature of defense markets. Among

other things, the technical nature of the market—with unique products that require significant engineering skill in applied specialties—and the close connectivity to customers create high barriers to entry in some defense market sectors.

- **Supplier Consolidation.** On the “supply” side of the ledger, as a consequence of the significant budget drawdowns in the post-Cold War era, there has been significant defense industrial consolidation—with fewer prime level and subsystem firms—in the United States (across the board) and Europe (most notably in aerospace but less so in ground and naval capabilities). Today there are only a limited number of primes at most that can compete for the next award in major platform areas (and typically only one at most in each of the large European countries). Numerous of these primes also are vertically integrated and have leading subsystem capability. Thus, the maintenance of competition in consolidating defense markets—and the innovation and affordability competition can bring—increasingly requires the participation of non-domestic suppliers. The subsystem level is somewhat less consolidated, with 3 or 4 suppliers in key systems.

These characteristics of defense markets are summarized in Table 2 and compared to the characteristics of a so-called “perfect” market of the type envisioned by Adam Smith.

Table 2 Perfect Market vs. Defense Markets

Perfect Market	Defense Markets
Many buyers—each with no market power	Multiple “Oligopsony” Buyers with significant power to set procurement rules, buying requirements, budgets and financing
Supply and Demand Elasticity (i.e., price changes materially affecting the level of demand and supply)	Demand driven by one or few customers on the basis of military requirements, policy and politics; more limited elasticities of demand and supply
Spot market; constant bidding and sales	Limited number of competitions for long-term contracts (especially for major weapon systems), often with sole source procurements
Fungible products	Products of limited fungibility (i.e., relatively unique) sold in broader, capability-based markets
Many capable competitors	Several capable competitors in most markets; risk that major program awards could result in market exit by losing party
Easy to enter and exit	Significant barriers to entry (technology, skills, incumbency, connectivity to customer)

The Role of Competition in Defense Markets: A Driver of Innovation and Affordability in an Era of Consolidation

While defense markets are relatively unusual, fundamental principles of modern economics still operate. As several Defense Science Board studies have found,¹¹ the presence of a sufficient number of capable competitors in core defense markets fosters both the affordability and innovation vital to superior war fighting. Thus, it has long been a cardinal tenet of DoD policy to seek to create and maintain a competitive environment in defense markets and programs to the extent possible.

The dilemma is that the dynamic changes in defense markets—the shift to fewer programs and the consolidation of the supplier base—make the maintenance of competition more difficult than in the past in some areas of the defense marketplace. At a time when we need significant innovation to address a range of challenging threats, the consolidation to five large prime contractors that have been delegated substantial autonomy to manage our supplier base poses real challenges.

No Evidence That Alternative Models are Better. While some observers have at times suggested that the United States discard the competition model in favor of some alternative approach to managing defense markets, to date there is no evidence that such substitute models yield measurably beneficial or even comparable results—in terms of cost discipline or innovation—that warrant their wholesale adoption. Indeed, history teaches that where DoD has departed from the competitive model and shifted to an alternative—whether monopolies, duopolies or “national” teams—the results have ranged from problematic at worst to uncertain at best. Indeed, one has only to review the enormous difficulties that DoD has experienced in managing market areas that have monopoly characteristics to understand this reality. The bottom line is that neither economic theory, empirical evidence nor common sense provide any reasonable basis to depart from our long-term default position on sustaining competition and multiple competitors in defense markets.

Foreign Market Access as a Strategic Tool to Maintain Competition

There are a number of available approaches—tools in our toolbox—that can be utilized by DoD to facilitate the maintenance of a competitive market. These include both demand-side measures (structuring acquisition strategies with competition in mind) and supply-side strategies (review of mergers, acquisitions and joint ventures on antitrust grounds). Increasing reliance on commerce technologies and suppliers also is an important tool to sustain competition into these markets.

¹¹ See the Defense Science Board Task Force Reports on: *Antitrust Aspects of Defense Industry Consolidation* (1994), *Vertical Integration and Supplier Decisions* (1997), and *Effects of DoD Acquisition Practices on Defense Industry Health* (2000).

Another strategic, key tool to ensuring competition in defense markets is to afford market access to foreign suppliers. In the context of a reduced U.S. domestic competitive base, the United States can seek to broaden our potential sources globally. In markets with one or two U.S. suppliers, the ability of a foreign firm to compete can help maintain a competitive environment.

Thus, market access—maintaining “open” as well as “competitive” procurements—has long been an instrument of policy for DoD and can be beneficial for other foreign government defense procurement authorities as well. As stated in the DoD Handbook on Industrial Capabilities still in force today, “[r]eliable foreign suppliers are usually acceptable, and in fact are encouraged to allow the DoD to obtain a wider competitive cost and technology base. Foreign dependence does not mean foreign vulnerability. The DoD seeks to use foreign sources wherever advantageous and within the limitations of the law.”¹²

Accordingly, it is in this context—considering foreign sources of supply as a strategic tool to preserve competition in consolidating defense markets—that this study reviews the accessibility of the U.S. and European defense markets.

¹² *A DoD Handbook: Assessing Defense Industrial Capabilities*, DoD 5000.60-H, U.S. Department of Defense (April 1996), p. 30. Available at: http://www.acq.osd.mil/ip/docs/5000_60h.pdf.

Chapter 2

The Study Methodology: A Disciplined Set of Diagnostics

As noted at the outset, examining the Transatlantic arms market is like looking through a kaleidoscope—there are numerous interrelated geopolitical, economic and other inherently subjective factors (cultural, institutional and attitudinal) that do not lend themselves to ready unbundling. We have developed a detailed and disciplined methodology to try to bring a greater degree of objectivity to the task and base our findings on empirical evidence *to the extent possible*. In the end, of course, there were judgments made—but they were fact-based—drawn from observations from hard data and the several hundred people interviewed during the course of this study. The list of government officials and market participants interviewed is set forth in Appendix II.

Specifically, as discussed in detail below, we developed separate methodologies for the Market Access analysis (Part A below) and the European Defense Industrial Policy analysis (Part B below).

Study Scope and Parameters: A Focus on Systems in More Classic Defense Product Areas. As a threshold matter, it also is important to understand that this study covers, and has evaluated data with respect to, the market for defense systems, subsystems and products in five more traditional defense market sectors: air vehicles, ships/submarines, ground vehicles, missiles and C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance).¹³ These markets do include a number of relatively newer platforms and products, such as unmanned aerial vehicles and associated ground stations, and precision munitions. As noted above, the inclusion of C4ISR means that the study also focuses on key markets relevant to force transformation or the “revolution in military affairs”—the enormous investment in technology that is bringing electronics and information technology onto the battlefield.

At the same time, however, the study does not include the burgeoning market for defense services, homeland security, biomedical capabilities, or other more recent and emerging technology and product areas. This means a large portion of U.S. Department of Defense (DoD) spending—more than 50 percent of the budget is spent on services—is technically not within the study scope. This study also does not cover dual-use components used in both defense and commercial applications. It covers software to the extent it is sold as part of a defense system or subsystem (or, in the case of C4ISR programs, is the subsystem or system); it does not, however, cover software services. Also, the study does not examine space systems, subsystems or space capabilities purchased as services (such as the large market for satellite services).

While some of our overall observations do apply to these other market segments (which were discussed to some extent during interviews we conducted), the available data we have reviewed by and large does not. Moreover, our analysis and findings for these other market segments could potentially be somewhat different given the broader connectivity of most of these market areas to the commercial marketplace.

¹³ These parameters were established by the U.S. Department of Defense, Deputy Under Secretary of Defense for Industrial Policy in its RFP associated with the study.

Limited Coverage of Defense Subsystems. In conducting this analysis we also have not found credible data on awards of subsystem contracts or, as discussed below, trade in subsystems. Hence, while we make observations about the impact of certain market conditions on subsystem sales—a key part of the defense marketplace, we lack meaningful data relevant to our observations. Therefore, we have relied on information gleaned from interviews and a review of the relevant government policies and practices.

A. Market Access: A Disciplined Examination of Cause and Effect

We developed and applied two distinct and reinforcing approaches to examine market access for U.S. firms in European defense markets, and market access for European firms in the American defense market. These two dissimilar methodologies essentially measure cause and effect.

The first methodology identifies and applies a set of metrics to each nation's rules, policies and practices affecting the ability of firms to access the defense market. These metrics help categorize and, based on data and judgment, assess impediments or barriers to market access. The second methodology focuses on the results or market outcomes, and measures trade and investment flows in defense markets (in effect, how two-way is the street today) as well as cross-border industrial footprints.

Methodology 1: Market Access Metrics

The study identified and evaluated a series of indices or “metrics” of how open defense markets are to foreign competition (i.e., what impediments or barriers exist). These market access metrics are set forth in matrix form on Figure 9 (pages 58-59). A detailed explanation of each of the tariff and non-tariff barriers, and our methodology for assessing each metric (i.e., which sets of data we relied upon in rendering our judgments and assigning scores to each country), is set forth in Appendix I.

In general, market access barriers or impediments take two broad forms: 1) tariffs and excise taxes, which raise the cost of imported goods and services relative to domestic counterparts; and 2) non-tariff barriers. Such non-tariff barriers include a wide range of government policies, practices and attitudes that create procedural and institutional roadblocks that serve to either:

- Exclude the foreign product (either outright or by making entry cost prohibitive to the foreign seller);
- Increase the price or opportunity cost of using a foreign product;
- Make foreign ownership of indigenous defense businesses impossible or so unattractive as to be untenable; or
- Otherwise render foreign products and services unattractive to the user community, thereby encouraging the use of domestic alternatives.

WTO Disciplines on Non-Tariff Barriers. The “non-tariff” metrics are based on the classic market access impediments that have long existed in commercial markets, which the United States and the European countries covered by this study have identified and addressed through the General Agreement on Tariffs and Trade (GATT), the creation of the World Trade Organization (WTO), and various other multilateral and bilateral agreements.¹⁴ The GATT and WTO agreements have established a series of disciplines to address these types of trade restrictions. For example, the WTO creates a national treatment requirement that requires members to accord imported products treatment that is no less favorable than treatment accorded to domestic products. The national treatment rule is intended to prevent countries from imposing discriminatory measures on imports and to eliminate hidden domestic barriers that could offset the most-favored nation requirement for tariffs established by the GATT.

The Exemption of Defense Trade From WTO Disciplines. The dilemma is that the WTO, by its terms, largely exempts defense trade from these key disciplines. Specifically, Article XXI of the GATT provides that “traffic in arms” and “other goods and materials” for military purposes are exempt from the rules imposed on trade under GATT and the package of agreements under the WTO. Hence, there is today no overall international agreement precluding the use of the types of non-tariff barriers that are prohibited in the commercial market. Of course, it should be recognized that dual-use articles that are used in defense systems are subject to the WTO disciplines. However, this study focuses on defense articles and not dual-use components or subsystems.

Based on our experience and knowledge of relevant defense markets, we have specially tailored our non-tariff metrics to the unique characteristics of defense markets. For example, we have added such criteria as the prevalence of offsets, a type of market impediment that is not traditionally used in non-defense markets.

Quantified Judgment Methodology. Where possible, we relied on quantitative measures in developing scores for each of the market access metrics on Figure 9. By nature, however, most of these non-tariff metrics have qualitative elements. Thus, we utilized a “quantified judgment” methodology that combines: 1) quantitative measures where data is available; and 2) our qualified judgments based on our analysis of underlying country policies and behaviors, taking into account available academic literature, relevant government documents, and the several hundred interviews we conducted with government, industry, military and academic representatives during the course of this study. In some cases (e.g., competition in procurement awards), we developed our own data sets for analysis. In others (e.g., offsets, ethics), we relied on existing data sources and scores compiled by a reputable source such as the U.S. Department of Commerce or the World Bank.

Thus, the assessments we have arrived at—based on this hybrid mix of inputs—need to be understood in this context. The analysis is not based on irrefutable scientific or mathematical proofs and surely can be debated. However, based on our empirical observations after a large number of interviews, review of available quantitative data, and our own judgments based on years of experience in defense markets, we believe the market access scores and assessments herein do provide both *reasoned* and *reasonable indications* of the most significant barriers in each country, which barriers are most commonly found across all of

¹⁴ The metrics were specifically developed by the Johns Hopkins School of Advanced International Studies, Center for Transatlantic Relations team in connection with an earlier study and were refined and applied in this study.

Figure 9 Market Access Matrix

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Tariff Barriers									
Competition in Procurement									
Actual Competition — Legacy									
Actual Competition — Non-Legacy									
Procurement Policy									
Fair and Transparent Procurement Process									
Transparency of Process									
Fairness of Process									
Domestic Content Requirements									
Buy National Laws									
Implied Workshare Requirements									
Offsets and <i>Juste Retour</i>									
Effective Offset Requirements									
<i>Juste Retour</i>									
Government Ownership and Control									
Government Ownership									
“Golden Share” Provisions									
Limits on Foreign Direct Investment									
Ethics and Corruption									
Bribery (Domestic)									
Foreign Corrupt Practices (Tolerance)									
Export Controls									
Effectiveness of Export Control Process									
Administrative Burden of Process									

the nations investigated and, ultimately, which countries have the more accessible defense markets. We do, of course, offer a cautionary note that *these scores should not be viewed as precise outcomes*—they are informed estimates only—and should not be used for further quantitative analysis outside the context of this study.

Documental Solutions (DOCSOL) Data Utilized. In developing quantitative measures of market access, we relied on: 1) data from DOCSOL's European Market Database for contract values; and 2) data from InfoBase Publishers' Defense/Aerospace Competitive Intelligence Service Programs Database for program descriptions and history.

At the request of our sponsor, we reviewed DOCSOL data only for defense systems and products (i.e., hardware) and not for professional and technical services, logistic support services, or the procurement of non-defense articles by Ministries of Defense. As noted above, the data reviewed includes missiles and munitions, ground vehicles, air vehicles, ships/submarines, and C4ISR products. While the data does not cover space systems generally, ground segment equipment for space systems (e.g., communications terminals) are included under C4ISR products.

It is important to recognize a number of key parameters of the DOCSOL database:

Specifically:

1. The data includes only systems sold to government procurement authorities, and does not include subsystems incorporated into such systems or subsystems sold separately to prime level contractors.
2. The data includes only sales to Ministries of Defense and the DoD. Hence, it primarily includes platforms rather than subsystems, although at times government customers may purchase subsystems in certain circumstances.
3. Retrospective data on contract awards was used for the period 2006-2008 (i.e., the period for which award data was available in the DOCSOL archives). DOCSOL data utilized in this study was for actual contract awards; we did not utilize data that showed speculative or derived opportunities.

Countries Evaluated

The study applies this set of market access metrics to the United States and seven European countries, all of which are members of the WTO: France, Germany, Italy, Sweden, Poland, Romania, and the United Kingdom (UK). France, Germany, Italy and the UK together account for the bulk of Western European defense spending (approximately 75 percent) and defense industrial capabilities (approximately 80 percent). Sweden was included to evaluate a non-NATO northern country with a significant defense industry and reputation for open market access. Poland and Romania were included as representatives of "New Europe"—the so-called North Atlantic Treaty Organization (NATO) Enlargement countries. While Spain is not formally investigated, we do from time to time refer to the Spanish defense market. Spain, together with the five other Western European nations studied, hold more than 85 percent of Europe's defense industrial base.

Country Defense Market Profiles. For each of the eight countries evaluated, the study team performed an in-depth review of the following:

1. military strategy and legacy;
2. current budget and operational profiles;
3. the bilateral defense trade relationship and history with the United States;
4. defense trade or procurement agreements with the United States;
5. major defense firms of that nation and U.S. firms' presence in that market; and
6. defense acquisition leadership, policies and practices relevant to competition and the broad range of market access issues.

This in-depth investigation of each nation provided the qualitative, and some degree of quantitative, input for the evaluation of each metric. The in-country interviews and data collection were augmented by extensive reviews of public data, World Wide Web research, and any reports and analysis developed by that nation's government or by other defense experts and analysts about each nation. The results of these in-depth interviews and literature reviews are captured in detail in Chapters 7-14 (i.e., the separate chapters that profile each nation investigated, including the United States).

Treatment of Central European Countries. In undertaking this study, we have carefully considered whether to compare the two Central European countries to the Western European countries studied. On the one hand, Poland and Romania, with their Warsaw Pact legacy, have transitioned from a sharply different past in all respects—political, economic, military and industrial—and their transitions are not complete (although Poland is very far along). Their overall governance structures (especially Romania's) and their acquisition systems are not as developed as those in France, Germany, Italy, Sweden and the UK. Their defense industries are in far different positions than those in Western Europe.

Significantly, no metrics are likely to reflect these considerable differences between Western European nations and these Central European nations in transition. Since we could not hold constant the innumerable variable conditions for these nations and their defense markets, one can argue that we are in effect comparing apples and oranges.

Nevertheless, despite these differences, we believe that reasonable comparisons can be made using the same metrics. First, we are applying the same metrics to all countries but with a judgment that considers each nation's circumstances. Second, despite sharply different legacies and market realities, both Poland and Romania have adopted Western standards—in Poland's case nearly twenty years ago. Both countries have joined NATO, the European Union (EU) and WTO, and have made considerable strides toward becoming democratic, market-driven societies. However, we are mindful that these countries face different realities. And, in all cases, the unique points of national context are addressed in detail in the chapter on each nation's defense market in Volume II of this report.

Rank Order Scoring

Each of the market access criteria or metrics was applied to each of the eight countries, using a scale of 1 through 10, with 10 being a perfectly open market (no impediments), and 1 being a fully closed market (no foreign access at all). Each country was evaluated against an abstract concept of a totally open and "perfect" market with no barriers or impediments to competition (i.e., not on a comparative basis relative to the other countries under

evaluation). Raw scores were then weighted (based upon the importance of each criterion to market access), averaged and normalized against the highest scoring country to derive both relative openness and a rank order for each country.

In giving weights to the different metrics, we afforded greater weight to some criteria than to others based on our qualitative judgment. Thus, we believe that such criteria as open and competitive procurement, domestic content and offsets were among the most important factors in defense markets. Similarly, we believe that other factors such as intellectual property (IP) and discriminatory standards were less significant today. Factors such as export controls and tolerance of corruption rank somewhere in between.

Measuring Traffic on the Two-Way Street

The study specifically reviews the following defense market outcomes (examining both annual and trend data where available):

- Transatlantic trade flows (prime, subsystem and product levels, both direct and through local affiliates)
 - U.S. Foreign Military Sales and Commercial Sales to Europe
 - European Sales to the United States
- U.S. market share in Europe and European market share in the United States
- U.S. content in major European defense programs and European participation in U.S. Programs (R&D and Procurement)
- Transatlantic armaments cooperation
 - Collaborative programs and projects (Research, Development, Testing and Engineering (RDT&E) and Procurement)
 - Cooperative funding relative to total RDT&E and Procurement
- Transatlantic supplier consolidation and integration
 - Mergers, Acquisitions & Collaborations
 - Footprints of U.S. defense firms in Europe & European firms in the United States
- The Coping Strategies of Defense Companies

Methodology 2: Defense Market Outcomes—Trade, Investment and Cooperative Engagement (How “Two-Way” Is the Street?)

Second, we have conducted a review of market access “outcomes”—defense trade and investment flows, the degree of Transatlantic defense cooperation, and the footprints of foreign defense firms in the different markets. This “outcomes” approach, which largely focuses on available quantitative data (and therefore is less qualitative than the market barrier metrics discussed above), will provide an independent evaluation of market openness to foreign participants as well as market “lessons learned.”

Trends in Transatlantic defense trade, investment and cooperation are good indicators of the extent of openness in the market. The magnitude and balance of defense trade between the United States and Europe, the relative market shares, and the trend lines are reasonable measures of the current extent of fortress-like behavior in the market and a predictor of future market development.

Calculating trade flows can be complex given the limitations of available data. A discussion of relevant methodological considerations in determining such defense trade balances is set forth in Appendix I.

B. The Emerging European Role in Defense Markets

Finally, in evaluating the degree to which emerging European (as distinct from national) laws, rules, policies, practices and arrangements will create fortress-like tendencies, we also utilized a set of qualitative metrics described below to evaluate developments in the EU and other European entities and arrangements pertaining to the defense industry. The effort here is to assess both the current realities today and the likely trajectory of the evolving European defense industrial laws, policies and practices over the next 10-15 years.

Evaluating the European Role in Defense Markets: Qualitative Metrics

1. Demand Side Metrics

- Are integrated European defense requirements emerging? Is European buying taking hold (i.e., through the EU rather than ad hoc)? Are European programs (Research and Technology; Procurement) likely?
- Is coordination of national buying likely to eliminate duplication and produce more efficiency (whether through more joint programs, elimination of duplicative national efforts, or otherwise)?
- Will European procurement rules produce a more open European and competitive defense market (i.e., opening national markets to more competition)?

2. Supply Side Metrics

- Has or will Europe put in place the enabling environment to facilitate the creation of a European, as distinct from national, defense industrial base?
- Will European rules, arrangements and policies encourage additional consolidation and rationalization of underutilized European defense capabilities?

3. Implications for United States

- Will emerging European rules, arrangements and policies create an impetus for closing the European defense market to U.S. suppliers (i.e., and reduce their ability to access the European market)?

Chapter 3

Defense Market Access Realities: Continued Impediments But Gradually Better and More Open Buying Habits

This chapter sets forth our assessment of market access utilizing the market access metrics described above (i.e., Methodology I). Figure 10 on the following pages summarizes our findings for each country studied on an unweighted and weighted basis. While our assessment of the market access metrics reveals a number of demonstrable findings, it should be noted that the overall findings do not change significantly whether the scoring is unweighted (i.e., with each market access metric accorded the same weight) or weighted (i.e., with each metric weighted in accordance with their importance to market access).

As discussed below in detail, the data reflects that continuing significant impediments to market access exist for most countries examined. However, better buying habits are emerging—driven largely by economic necessity in Europe and somewhat more relaxed attitudes in the United States toward foreign contractor participation and a genuine desire for “best value” solutions.

Generally, the countries studied are gradually opening their procurement systems to competition. There is, however, evidence that European national procurements, while increasingly awarded on a competitive basis, are more open to *European* solutions and will pose increasing challenges for U.S. defense firms seeking market access. U.S. firms continue to award most contracts on a competitive basis but do not necessarily open these competitions to foreign participation—although there is evidence of changing behavior on some programs.

Not surprisingly, as procurements do become more open and competitive, more subtle market barriers or imperfections—such as informal domestic work share requirements today and possibly standards in the future—are becoming of greater importance. This shift toward more subtle market access barriers reflects the basic fact that governments spending money on defense prefer to spend the money at home where possible, rather than on foreign sources of supply.

Analysis of Specific Market Access Metrics

The analysis below assesses the overall importance of each market access impediment in the defense markets studied, and evaluates how each country studied performed on each of these metrics.

1. Tariff Barriers

Tariff Barriers are not a Major Impediment to the Accessibility of Defense Markets. In general, all of the countries studied are member countries of the World Trade Organization (WTO), have bound tariff rates, and are required to provide most-favored nation treatment to imported goods from every other country included in this study (i.e., they must provide all WTO members the benefit of a lower tariff rate offered to any single country). The most-favored nation and national treatment rules under the WTO protect the countries that are the subject of this study from overt discrimination.

Figure 10 Market Access Assessment

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Tariff Barriers	1.00	0.75	0.75	0.75	0.50	0.50	0.75	0.75	0.75
Competition in Procurement	1.00	0.45	0.31	0.43	0.66	0.52	0.68	0.62	0.42
Actual Competition — Legacy	0.25	0.00	0.01	0.00	0.02	0.00	0.05	0.01	0.01
Actual Competition-Non — Legacy	0.25	0.02	0.10	0.18	0.24	0.22	0.18	0.18	0.11
Procurement Policy	0.50	0.43	0.20	0.25	0.40	0.30	0.45	0.43	0.30
Fair and Transparent Procurement Process	1.00	0.80	0.70	0.50	0.60	0.50	0.95	0.95	0.80
Transparency of Process	0.50	0.45	0.40	0.25	0.30	0.25	0.50	0.50	0.40
Fairness of Process	0.50	0.35	0.30	0.25	0.30	0.25	0.45	0.45	0.40
Domestic Content Requirements	1.00	0.90	0.75	0.75	0.95	0.95	0.95	0.80	0.65
Buy National Laws	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.25
Implied Workshare Requirements	0.50	0.40	0.25	0.25	0.45	0.45	0.45	0.30	0.40
Offsets and <i>Juste Retour</i>	1.00	0.28	0.20	0.20	0.03	0.27	0.17	0.29	1.00
Effective Offset Requirements	0.50	0.08	0.00	0.00	-0.17	0.07	-0.03	0.09	0.50
<i>Juste Retour</i>	0.50	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.50
Government Ownership and Control	1.00	0.65	0.95	0.60	0.50	0.45	0.95	0.80	0.95
Government Ownership	0.50	0.35	0.45	0.30	0.25	0.20	0.45	0.45	0.45
“Golden Share” Provisions	0.50	0.30	0.50	0.30	0.25	0.25	0.50	0.35	0.50
Limits on Foreign Direct Investment	1.00	0.60	0.40	0.40	0.70	0.60	1.00	0.70	0.60
Ethics and Corruption	1.00	0.68	0.68	0.60	0.53	0.38	0.90	0.75	0.73
Bribery (Domestic)	0.75	0.53	0.53	0.45	0.38	0.23	0.68	0.60	0.53
Foreign Corrupt Practices (Tolerance)	0.25	0.15	0.15	0.15	0.15	0.15	0.23	0.15	0.20
Export Controls	1.00	0.60	0.60	0.60	1.00	1.00	0.90	0.80	0.50
Effectiveness of Export Control Process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Administrative Burden of Process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ITAR Related Conduct & Policy	1.00	0.60	0.60	0.60	1.00	1.00	0.90	0.80	0.50

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Intellectual Property Rights	1.00	0.90	0.90	0.80	0.50	0.50	0.90	0.90	0.70
Technical Standards	1.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Unweighted Raw Score (1-11)	11.00	7.40	7.03	6.43	6.76	6.46	8.95	8.16	7.95
Unweighted Normalized Score (0-1)		0.67	0.64	0.58	0.61	0.59	0.81	0.74	0.72

	Weight	France Weighted	Germany Weighted	Italy Weighted	Poland Weighted	Romania Weighted	Sweden Weighted	UK Weighted	U.S. Weighted
Tariff Barriers	0.2	0.15	0.15	0.15	0.10	0.10	0.15	0.15	0.15
Competition in Procurement	1.0	0.45	0.31	0.43	0.66	0.52	0.68	0.62	0.42
Fair and Transparent Procurement Process	1.0	0.80	0.70	0.50	0.60	0.50	0.95	0.95	0.80
Domestic Content Requirements	0.8	0.72	0.60	0.60	0.76	0.76	0.76	0.64	0.52
Offsets and Juste Retour	0.8	0.22	0.16	0.16	0.02	0.21	0.14	0.23	0.80
Government Ownership and Control	0.7	0.46	0.67	0.42	0.35	0.32	0.67	0.56	0.67
Limits on Foreign Direct Investment	0.7	0.42	0.28	0.28	0.49	0.42	0.7	0.49	0.42
Ethics and Corruption	1.0	0.68	0.68	0.60	0.53	0.38	0.90	0.75	0.73
Export Controls	0.7	0.42	0.42	0.42	0.70	0.70	0.63	0.56	0.35
Intellectual Property Rights	0.3	0.27	0.27	0.24	0.15	0.15	0.27	0.27	0.21
Technical Standards	0.3	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Raw Score	7.5	4.82	4.47	4.04	4.59	4.29	6.08	5.46	5.30
Normalized Score (0-1)		0.64	0.60	0.54	0.61	0.57	0.81	0.73	0.71
Normalized National Score		0.79	0.73	0.66	0.76	0.71	1.00	0.90	0.87
Rank Order		4	6	8	5	7	1	2	3

While defense products are exempt from the general WTO rules governing tariffs and trade, all of the European countries studied other than Poland and Romania have entered into a reciprocal procurement memorandum of understanding (MOU) with the United States that affords duty-free treatment to the import of defense articles between these countries.

Hence, tariffs are not a factor for *trade in defense articles* between the United States and all countries other than Poland and Romania (all of which received the same scores). Poland and Romania do have tariffs applicable to U.S. defense imports, but these rates are relatively low and are not a significant factor in defense trade. Because of this distinction, Poland and Romania have a lower score on tariff barriers than do the other countries examined.

Tariffs do have a limited effect on Transatlantic *trade in dual-use articles used in defense systems*. In this regard, all the European countries under study also belong to the EU. Under a WTO exemption for customs unions, the EU has been able to eliminate *tariffs altogether* on goods traded internally between Member States while maintaining the uniform WTO-based set of third-country duties for particular types of goods (e.g., agricultural products and high technology equipment) intended to support the European market. Moreover, these dual-use articles are not subject to the duty-free treatment in the reciprocal procurement MOUs, which apply only to defense articles. Thus, with respect to such non-defense products (e.g., dual-use equipment) used in defense systems where the bilateral MOUs do not apply, the EU's internal market "zero rates" have the effect of creating a competitive advantage for member countries *vis-à-vis* other third countries that are subject to tariffs on such dual-use products. However, the differentials are not high and, hence, the discrimination is limited. Thus, the European countries studied were slightly graded down on this metric *vis-à-vis* the United States.

2. Open and Competitive Procurement

Our analysis shows that the historic reality in defense of largely closed national markets is changing. There have been material changes for the better as the United States and most of the European countries studied are gradually opening up segments of their procurement market to some degree of foreign competition.

We have based our findings on the degree of competitive procurement for each country on our review of:

1. The procurement policies of these firms (taking into account their substantive merits as well as our view of their credibility and likelihood of implementation); and
2. The actual competition in "major defense programs" awarded over the 2006-2008 period in each of these countries.¹⁵ Specifically, Figures 11 and 12 set forth the degree of competitive procurement in all European countries examined and the United States based on 2006-2008 acquisitions.

¹⁵ As fully discussed in Appendix I, Documental Solutions data on awards was used in undertaking a review of "major programs" in each country studied in 2006-2008. References to "recent buying" herein refers to this time frame. The "major" defense programs examined in each country were defined in accordance with the size of the nation's overall defense spending. For Sweden (\$7 billion in defense spending), Poland (\$7 billion) and Romania (\$3 billion), major defense programs were those exceeding \$10 million during 2006-2008 period. For France (approximately \$50 billion in defense spending), Germany (\$37 billion), Italy (\$17 billion) and the UK (\$68 billion), major defense programs were defined as programs exceeding \$50 million a year. For the United States (with a defense budget well exceeding \$600 billion in recent years, including supplemental spending), major defense programs were defined as programs worth \$100 million or more.

Figure 11 Total European Defense Procurement by Award Type, 2006-2008 in Billions of Dollars (\$)

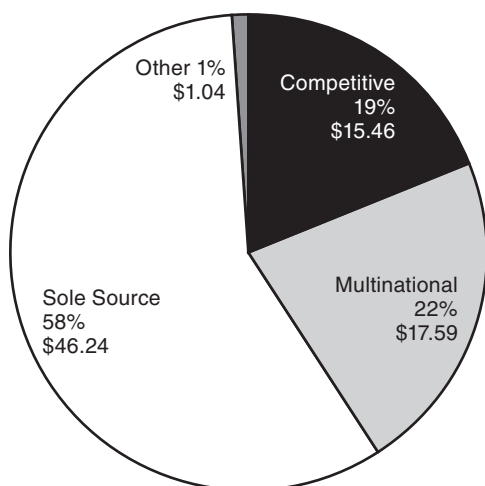
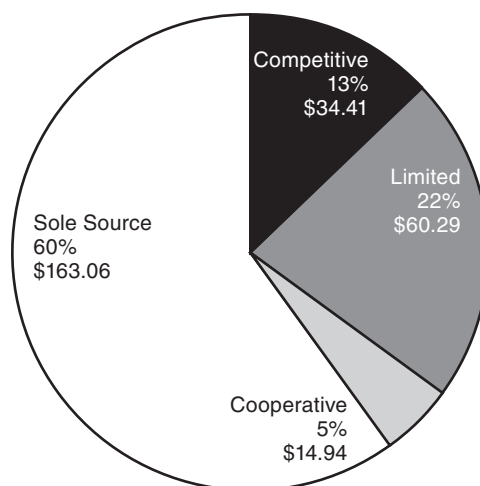


Figure 12 Total U.S. Procurement by Award Type, 2006-2008 in Billions of Dollars (\$)



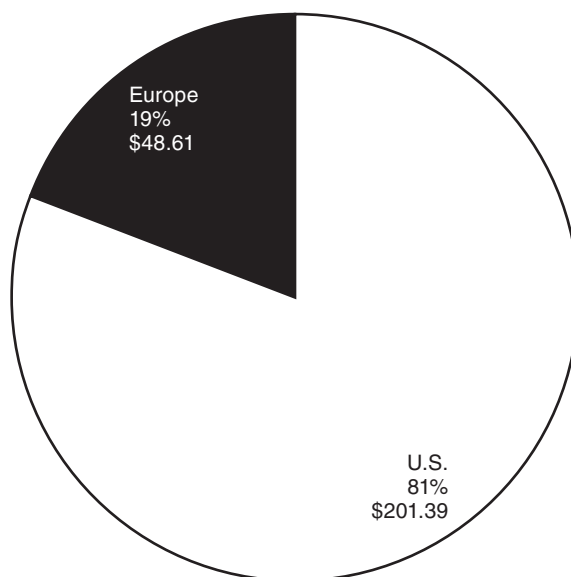
Distinguishing “Open” and “Competitive” Procurement

Interestingly, as shown on Figures 11 and 12, the relative degree of competitive awards looks identical—with the United States at 13 percent and Europe at 19 percent. However, one key question in reviewing the data on major contract awards is whether all procurements identified as competitive were also open to foreign participants.

In practice, U.S. procurements that are competitive can be and often are restricted to national firms. In Europe as well, procurements may also be restricted (formally or informally) to national or European firms. As discussed in Chapter 5, the new European Commission (EC) Directives will make it more difficult for European governments to close an award to other European suppliers but does not require that awards be open to non-European suppliers.

For the United States, we have made judgments, on a program-specific basis, as to whether competitive programs were also open. We excluded limited competition programs from our analysis because they were closed to foreign bidders, to the best of our knowledge.

Similarly, in the European countries studied, we also believe that not all of the competitive awards were open to U.S. firms; this varies from country to country. However, ascertaining which is which is less straightforward. For the UK, Poland, and Romania, we believe that most competitive awards were “open”, and based on the policies and practices in those countries and interviews with market participants. In most of continental Western Europe, however, the picture is less clear. A cursory review of the program data shows some U.S. awards (confirming some openness) but also shows primarily European or national awards in most of the countries. Also, based on our review of national policies in these countries as well as interviews with market participants, we believe that not all of these awards are truly open to non-European suppliers.

Figure 13 Legacy vs. New Procurement in Billions of Dollars (\$)

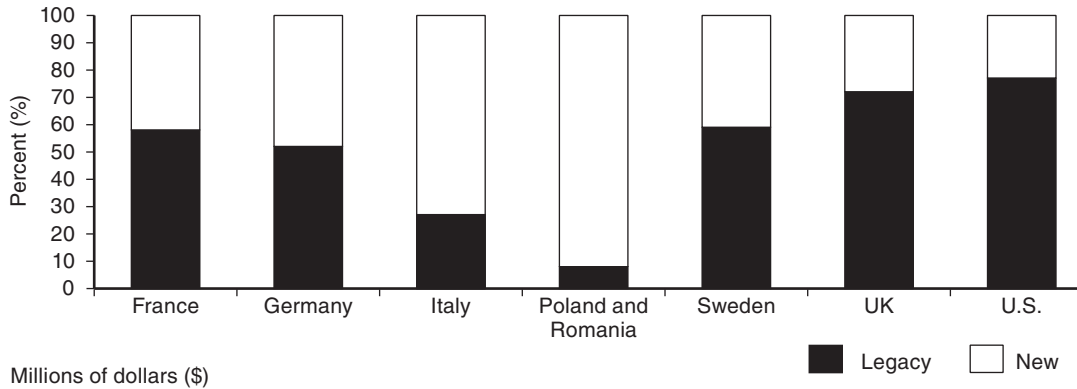
Source: Documental Solutions.

In any event, since we have no empirical basis on which to make this judgment given the range of programs involved, for data analysis purposes we have assumed that competitive means open for the European contract awards studied (although we recognize a portion of these, especially in continental Western Europe, were not truly open to U.S. bidders). We address the “openness” question more directly in our individual assessments of procurement policies in each country, which takes into account evolving trends in allowing foreign bidders to participate. In European countries, we also considered cooperative programs as non-competitive in this analysis because *juste retour* policies are followed and funding generally flows back to firms in the European countries that fund the project.

Evaluating Legacy and New Sales: The Continued Primacy of Legacy, Sole Source Awards

As shown on Figure 13, one important observation is that the majority of spending on major defense programs in all of the countries examined in the last three years—some 81 percent overall or \$250 billion—is for legacy programs (i.e., programs where the initial award for development and/or procurement were made at some point in the past). This is not surprising and reflects that large development and production programs, which take years to bring to fruition, are recipients of most defense funding. The ratio of legacy and new buys varies by country (see Figure 14), but the pattern of a large percent of legacy programs holds in the United States, United Kingdom (UK), France and Italy—many of the largest defense spenders. Germany and Sweden had about 50 percent legacy awards overall. The most notable exceptions were Poland and Romania at only 8 percent legacy and approximately 92 percent new awards; these countries have largely scrapped older, Soviet legacy systems and products in favor of new programs.

Figure 14 Legacy vs. New Procurement by Country

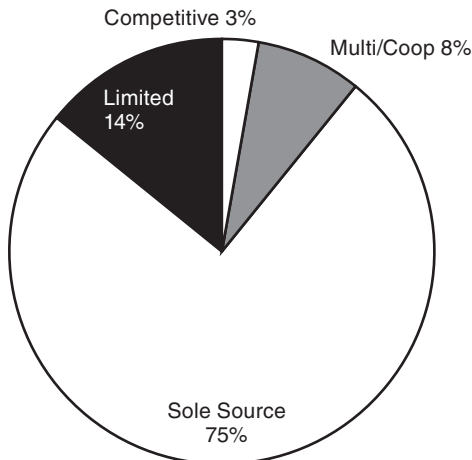


	France	Germany	Italy	Poland and Romania	Sweden	UK	U.S.
Legacy	15,179	4,656	793	409	1,565	18,889	201,835
New	10,925	4,305	2,069	4,590	1,074	7,315	61,293
Total	26,104	8,961	2,862	4,999	2,639	26,204	263,128

Source: Documental Solutions.

Moreover, as shown on Figure 15, the lion's share of awards on such legacy major programs—approximately 75 percent by value—were awarded on a sole source basis. Again, this is not surprising in light of defense market realities. Since the original awards on many of these mature systems and products were made years ago to a prime contractor, it would be highly unlikely, even with new acquisition policies, that a procurement authority would want to open the follow-on awards to competition; the economic costs of such a change-out would be significant.

Figure 15 Legacy Procurement by Award Type



Millions of dollars (\$)

	Competitive	Mutli/ Coop	Sole Source	Limited
Total	7,584	20,116	187,736	35,007
U.S.	6,797	12,461	147,570	35,007
Europe	788	7,655	40,166	0

Source: Documental Solutions.

The Slow Pace of Change in Defense Markets

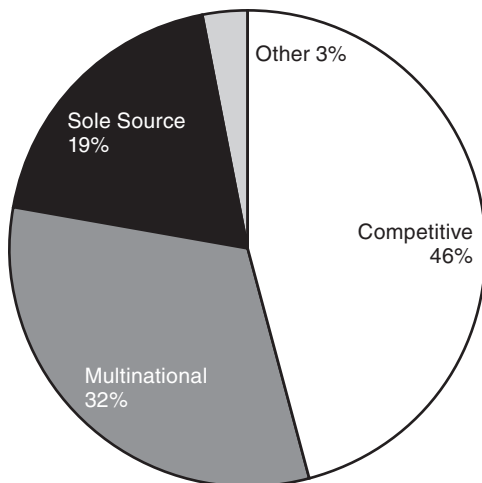
The fact of such sizable sole source legacy programs highlights that defense acquisition buying has a long lag time. Programs take years to come to fruition and follow-on production, major modifications, and maintenance—typically sole sourced—usually continues for many years. Hence, new buying behaviors, and in turn buying patterns, will change slowly and the changes will largely be reflected on new programs.

Therefore, to take these market dynamics into account, we have separately evaluated in the analysis below the following market views:

3. The overall market in Figure 13 (including legacy major programs as well as new ones); and
4. New programs standing alone in Figure 16 (excluding legacy major programs).

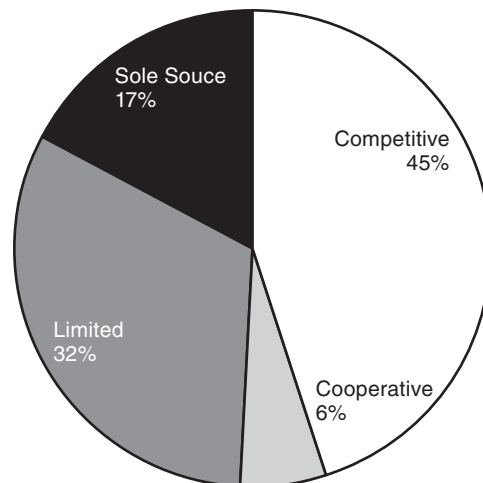
This allows us to both review the overall situation and obtain a perspective on the changing competitive dynamics through reviewing buying habits on new programs—which was revealing.

Figure 16 New European Procurement by Award Type, 2006-2008



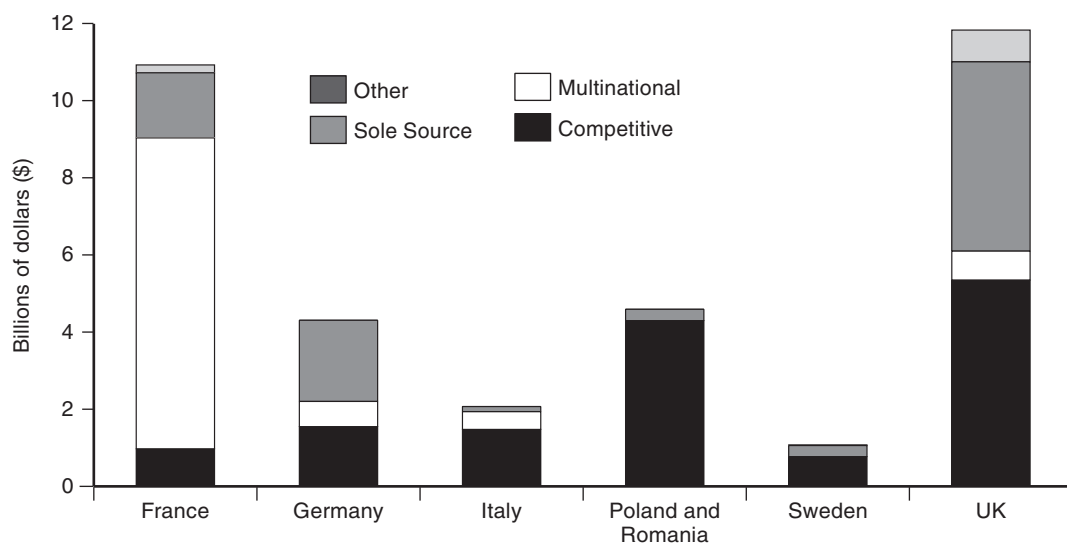
Source: Documental Solutions.

Figure 17 New U.S. Procurement by Award Type, 2006-2008



Source: Documental Solutions.

Figure 18 New European Procurement by Country, 2006-2008



Source: Documental Solutions.

Changing Buying Habits: The Majority of “New” Major Defense Program Contracts are Competitively Awarded

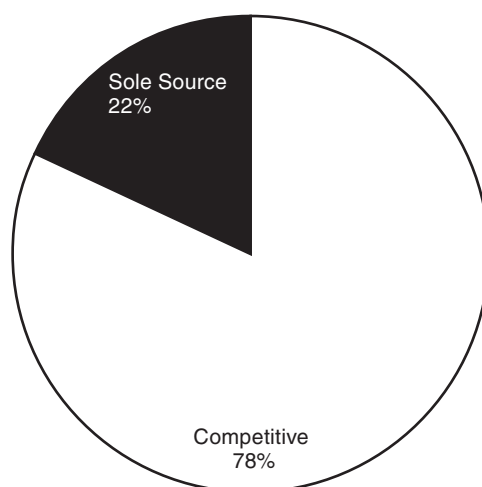
As shown on Figures 16 and 17, the “new” buys in Europe and the United States on the major defense programs studied show significant use of competitive procurement. In Europe, this reflects clear changes in overall buying patterns away from older, national-centric sole source habits.

Figure 18 shows the “new” major contract award data by each European country and highlights how some nations have made a sizable portion of their total awards competitively. Obviously, however, the degree of competition varies by country.

Based on both our review of changing procurement policies and major program awards in the various countries, Table 3 shows total scores for open and competitive procurement for each country examined.

Table 3 Open and Competitive Procurement—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Competition in Procurement	1.00	0.45	0.31	0.43	0.66	0.52	0.68	0.62	0.42
Actual Competition—Legacy	0.25	0.00	0.01	0.00	0.02	0.00	0.05	0.01	0.01
Actual Competition—Non-Legacy	0.25	0.02	0.10	0.18	0.24	0.22	0.18	0.18	0.11
Procurement Policy	0.50	0.43	0.20	0.25	0.40	0.30	0.45	0.43	0.30

Figure 19 Poland and Romania—Total Procurement Awards in Millions of Dollars (\$)

Millions of dollars (\$)

	Competitive	Sole Source
Total	4,323.22	973.00
Legacy	29.50	676.30
New	4,293.72	296.70

Source: Documental Solutions.

Different Regional and Country-Specific Patterns

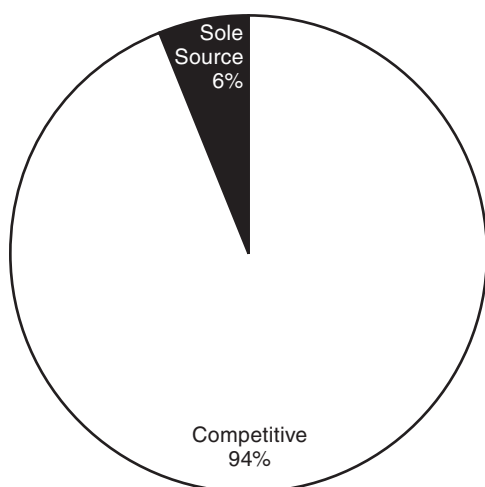
Specifically, based on our review of each country's policies and the contract data, we have a number of observations on a regional and country-specific basis. The analysis shows different patterns and degrees of competition and cooperation in the Central European countries (Poland and Romania), the UK, continental Western European countries (France, Germany, Italy, and Sweden), and the United States. Therefore we have evaluated the countries in these groupings and also provide country-specific insights (which are fully explored in the individual country-specific chapters in Volume II of this study).

Poland and Romania: The Anomaly of an Eastern European Clean Slate

Somewhat surprisingly, Poland and Romania receive relatively high scores for open and competitive procurement. This is in part a reflection of their unique political and industrial context, which produced a “clean slate” defense market (with more focus on new than legacy buys) that in many ways is quite different from the conditions of Western European defense markets. The ratings reflect three basic considerations:

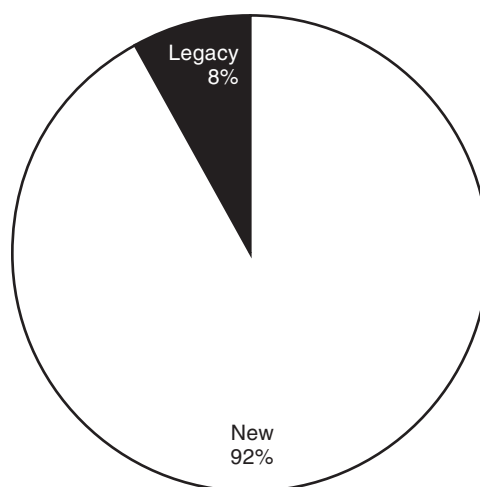
- **Adoption of Pro-Competitive Procurement Policies but Challenges in Execution.** First, both countries have adopted and implemented new procurement policies based on Western models. In Central Europe, under the communist governments, there was no competitive procurement. Both Poland and Romania have now put

Figure 20 Poland and Romania—
New Procurement
Awards



Source: Documental Solutions.

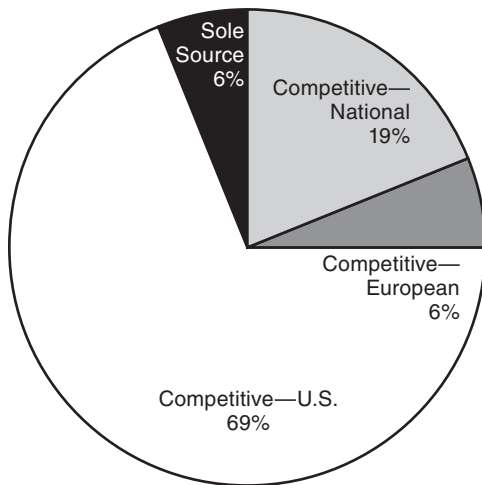
Figure 21 Poland and Romania—
New vs. Legacy
Procurement



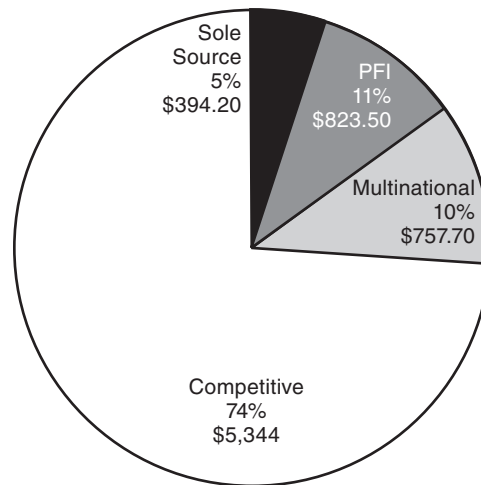
Source: Documental Solutions.

in place modern procurement systems, drawing heavily from European standards in the case of Poland (2004) and American rules in the case of Romania (1998). In both cases, the governments have had to learn nearly from scratch how to establish requirements, formulate requests for proposal, evaluate tenders, make awards, and manage programs in a cost-effective manner. In both countries, however, there is a serious shortage of trained personnel needed for the procurement systems to function effectively; and particularly in Romania, there are serious inefficiencies and a gap between plans and reality. Hence, in both countries, we have marked down their procurement policy scores in order to reflect significant implementation and execution issues.

- **Most New Procurements Competed.** In any event, in both countries, most new platform/system or major modification procurements are made through open competition. As shown in Figures 19 and 20, Poland and Romania have the highest degree of competitive procurement of all of the countries studied.
- **Limited Legacy Sales Are Mostly Sole Source.** As shown on Figure 21, Poland and Romania have very limited legacy sales—only 8 percent of total awards examined, by far the least of the countries studied. This is extraordinary and reflects a unique post-Soviet world where governments have terminated most Soviet-era legacy programs and instead turned to new procurements. In contrast, the Western European countries examined have a considerable sunk cost in mature legacy platforms developed alone or in a multinational team that are now in production, upgrade or sustainment. Thus, not surprisingly, in these nations, a larger percentage of spending is on these legacy national programs. Moreover, in the limited circumstances where these countries do award contracts for legacy capabilities, they are on a sole source basis (and usually to state-owned firms).

**Figure 22 Poland and Romania—
New Procurement by Award
Type and Supplier**

Source: Documental Solutions.

**Figure 23 United Kingdom—New
Procurement by Award Type
in Millions of Dollars (\$)**

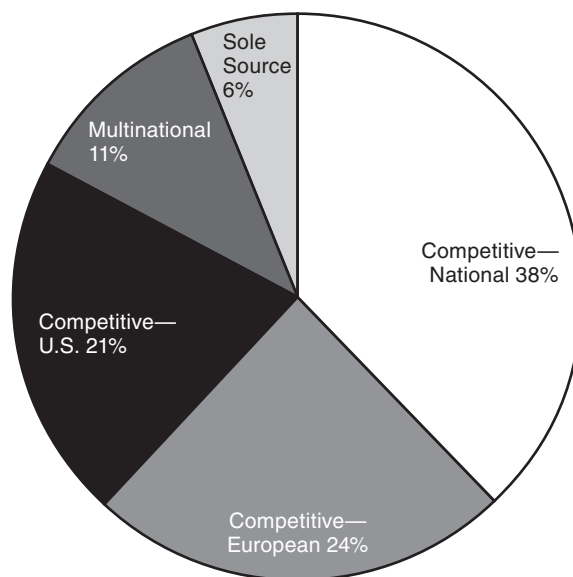
Source: Documental Solutions.

- U.S. Firms Won a Large Share of Awards.** Significantly, as shown on Figure 22, U.S. firms have won approximately 69 percent of awards made competitively on new major programs in the 2006-2008 period—attesting that the systems in both countries are relatively “open” as well as “competitive.” It should be recognized, however, that the United States’ winning offerings in these competitions included both generous financial arrangements and government-to-government financial assistance. In effect, the competition was in good measure about which seller’s government would provide the best package and, in a good number of these situations, the United States prevailed.
- No Participation in European Cooperative Programs.** Finally, neither Poland nor Romania has participated in the large European cooperative programs (e.g., Euro-fighter), which also are non-competitive in nature. In contrast, these cooperative programs are significant portions of defense spending in Western European countries.

United Kingdom: Longstanding Competition Policy Tempered by Industrial Policy and Cooperative Exceptions

The UK’s somewhat “middle of the pack” score is surprising given its history. Unlike other European countries examined, the UK has a longstanding explicit policy of “open and competitive procurement”—permitting both U.S. and European firms to participate in its defense markets. U.S. firms have competed regularly and won awards in the UK, including at times as primes on major programs.

Competition as the Norm on New Programs. As shown on Figure 23, available data demonstrates that competition is the norm in the UK—especially in new major defense

Figure 24 United Kingdom—New Procurement by Award Type and Supplier

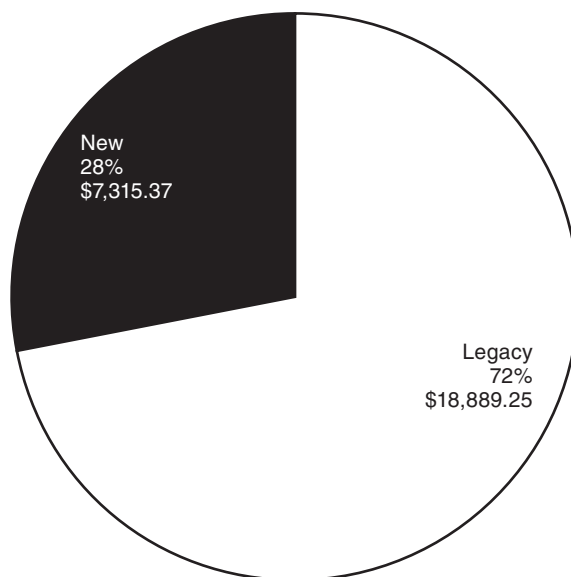
Source: Documental Solutions.

programs—with 74 percent of new major programs (by value) awarded competitively. It also is worth noting that this study does not include services, where the UK's competitive outsourcing (e.g., for defense infrastructure such as shipyards) is well known and, if included, might improve the UK's overall score.

UK “Openness” Reflected in Substantial Awards to European and U.S. Firms. Significantly, the data on new major program awards also shows the substantial role of continental European suppliers in the UK market. As shown on Figure 24, 24 percent of the awards by value went to continental European-based firms—indicating that the UK is clearly open to other European suppliers. Interestingly, U.S. firms prevailed in only 21 percent of the awards, with the remaining 38 percent going to UK-based firms. However, we generally believe that most of these sales were based on competitions open to U.S. firms. Part of this portrait may also reflect that several of the European firms making sales in fact have a substantial UK presence (Finmeccanica through AgustaWestland and Thales through Racal Electronics and other acquisitions) and therefore might be viewed as UK firms.

Against this general pro-competition policy and practice, the somewhat lower score for the UK reflects several basic considerations:

- **A Defense Industrial Policy Shift: A Balance Between Partnering and Competition.** Under its new defense industrial policy, the UK has shifted its stance somewhat away from a total reliance on competition and more toward a balanced approach that includes a new focus on long-term sole source “lifecycle” contracts and partnerships with prime level vendors to sustain in-inventory major platforms. Under these lifecycle contracts, the UK selects one firm for long-term (e.g., 20

Figure 25 United Kingdom—Legacy vs. New Procurement in Millions of Dollars (\$)

Source: Documental Solutions.

years) sustainment and modification contracts for all the legacy systems in a given product area. There will apparently still be provision for the prospect of competition of major upgrades and subsystems work under these partnering arrangements.

- **Considerable Legacy, Sole Source Awards.** As shown on Figure 25, a considerable portion of the UK's major program defense spending is on its sizable legacy platforms—more than 72 percent in value terms. Consistent with the overall trends, more than 89 percent of the awards on these legacy programs were made sole source to the long-term incumbents on these programs.
- **Participation in European Cooperative Program.** Finally, the UK has participated in a number of non-competitive European programs.

Thus, the UK's "middle of the pack" grade reflects that competition may not always be the solution sought by the UK—especially in procuring, modifying or sustaining legacy systems.

Continental Western Europe: A Gradual Shift from Sole Source National Buying to Better Value Buying.

The Primacy of Legacy, Sole Source Spending. Again, it is important to recognize that legacy programs dominate national spending in continental Europe. As shown on Figure 26, approximately 61 percent of all major program procurements by value in 2006-2008 were made on legacy systems. And, most of these legacy systems—approximately 78 percent in terms of value—were purchased on a sole source basis for the same reasons discussed above (see Figure 27).

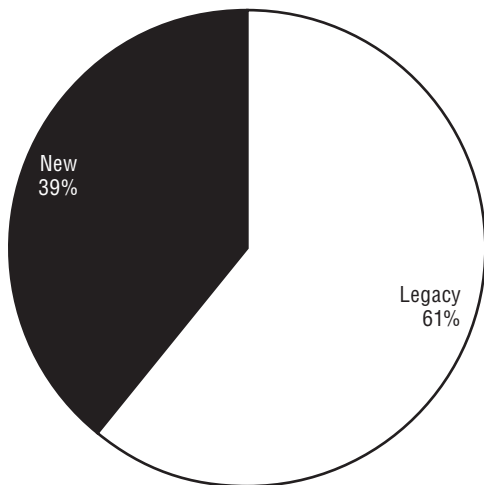
Procurement in continental Western Europe (France, Germany, Italy and Sweden, among others) has traditionally been characterized by:

- A significant percent of sole source awards to national suppliers;
- Some cooperative (multinational) procurement programs;
- Periodic awards (also usually sole source) to American firms where the buying country seeks some particular developed capability; and
- Limited intra-European buying outside of cooperative programs.

There appears to be an emerging shift in new contract awards away from the longstanding practice of national, sole source buying toward more open, competitive and “better value” buying on new programs.

There also is a pronounced shift toward greater European buying. This includes both non-national European firms winning a considerable portion of the new competitive awards as well as expanded cooperative European buying. On legacy programs, where the contract was awarded years ago, sole source follow-on contracts to existing national incumbents are largely the rule.

Figure 26 Continental Europe—Legacy vs. New Procurement

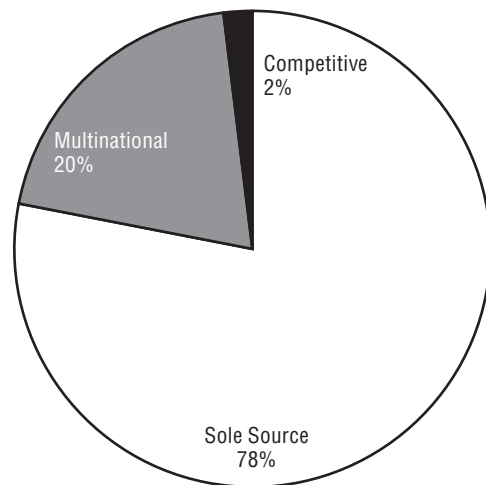


Millions of dollars (\$)

	Legacy	New
Total	29,335	18,373
France	15,179	10,925
Germany	4,656	4,305
Italy	7,930	2,069
Sweden	1,570	1,074

Source: Documental Solutions.

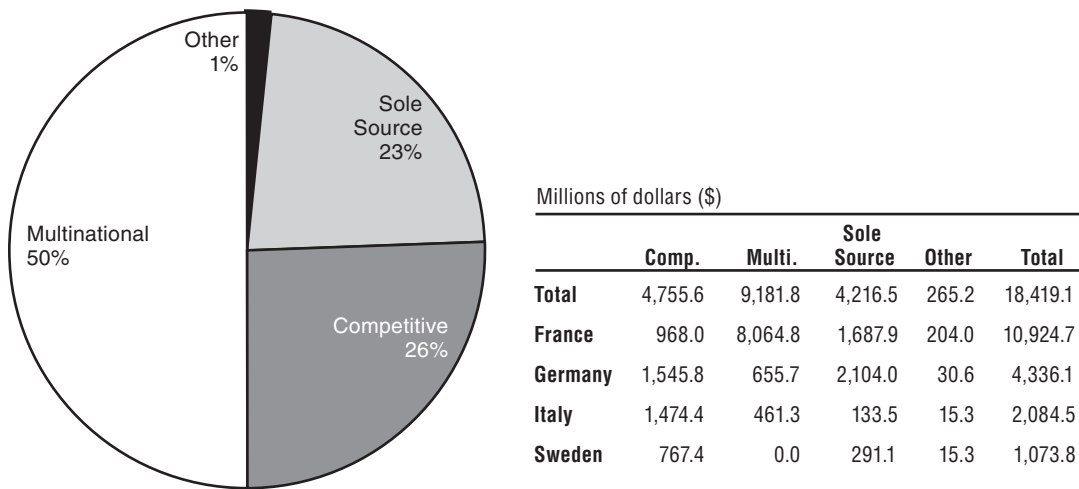
Figure 27 Continental Europe: Legacy Procurement by Award Type



Millions of dollars (\$)

	Comp.	Multi.	S.S.	Total
Total	442.7	5,996.1	22,835.1	29,273.9
France	0.0	398.3	14,781.0	15,179.3
Germany	131.7	2,005.2	2,519.2	4,656.1
Italy	0.0	3,592.6	4,281.0	7,873.6
Sweden	311.0	0.0	1,253.9	1,564.9

Source: Documental Solutions.

Figure 28 New Procurement by Award Type

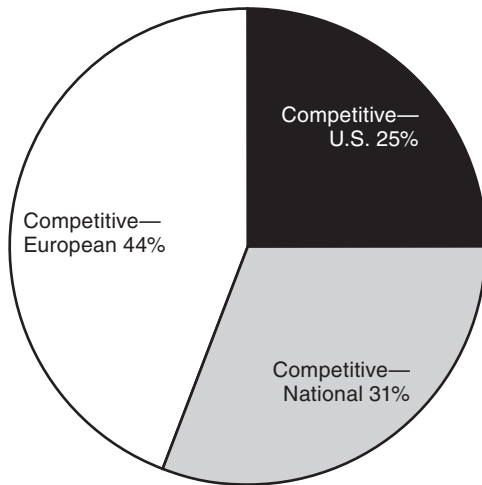
Source: Documental Solutions.

The Increased Competition on New Major Program Awards. As shown on Figure 28, the data on “new” major defense programs (i.e., excluding legacy buys) in continental Europe during the last three years is quite illuminating. It shows a significant degree of competition in a number of Western European countries studied—including Germany, Sweden and Italy in particular (with some lesser signs of competition in France). As compared to historical norms (see Figure 2 in the Executive Summary), a high percentage of all “new” major defense programs in the continental European countries studied—approximately 46 percent in terms of value—were awarded on a competitive basis. A much lower percentage of these new programs—19 percent—was awarded on a sole source basis.

In short, this review of new awards on major programs shows a clear trend toward competitive procurement and confirms that new buying habits are taking hold in continental Western Europe. This shift is also manifest in both published and informal national policies as well as in anecdotal evidence of recent procurements and consistent comments from market participants we interviewed.

Significant Inter-European Buying on New Competitive Programs. Another striking finding is that a significant portion of the buying on new continental European programs was from suppliers in other European nations. As shown on Figure 29, approximately 44 percent by value of new European contracts awarded competitively went to firms from other European countries. Thus, once closed continental European markets, dominated by sole source *national* buying, are opening their doors to firms from *other* European countries on new programs. Of course, the “new” portion of the buying is relatively small—approximately \$4.7 billion (compared to \$4.2 billion in legacy buying and \$9.1 billion in cooperative buying). Nevertheless it does provide a sense of the dynamics underway. As shown on Figure 30, the dynamics are necessarily more muted when looking at all new procurement (not just competitive new procurement) because of the continued prevalence of sole source national procurement.

Figure 29 Continental Europe—Competitive Awards by Country (New Procurement)

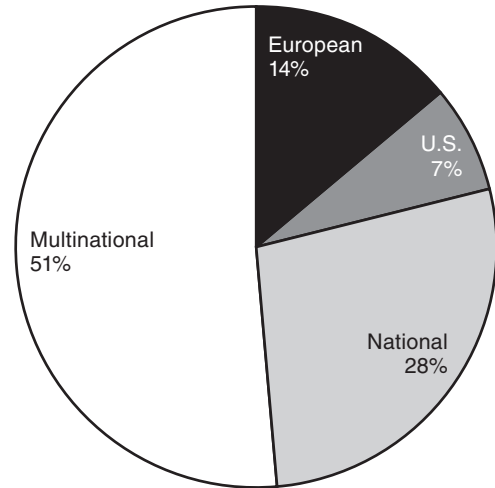


Millions of dollars (\$)

National	European	U.S.
1,508.80	2,124.90	1,222.10

Source: Documental Solutions.

Figure 30 Continental Europe—New Procurement—Contract Awards by Supplier



Millions of dollars (\$)

	Nat.	Multi.	European	U.S.	Total
Total	4,969	9,182	2,517	1,255	17,923
France	2,000	8,065	551	309	10,925
Germany	2,165	656	864	170	3,855
Italy	691	461	205	712	2,069
Sweden	113	0	897	64	1,074

Source: Documental Solutions.

How “Open” Is European Competitive Buying to U.S. Firms? This shift toward better buying habits has its limitations, however.

First, while U.S. firms won some of the competitively awarded contracts in continental Europe, the relative percentage of U.S. awards was relatively small overall both in dollar terms and in numbers of contracts. Of the new contracts awarded competitively, as shown on Figure 29, approximately 31 percent by value (\$1.5 billion) went to national firms and 44 percent (\$2.1 billion) to firms from other European nations, with only 25 percent (\$1.2 billion) awarded to U.S. firms. Moreover, more than \$700 million of this total involves a single U.S. sale—Boeing’s tanker sale to Italy. This suggests an increasing willingness to rely on other European firms but that openness to U.S. bidders remains somewhat limited.

Second, the better buying habits are by no means applicable to all procurements. Some sectors like land vehicles and ships are still heavily state-dominated and have less competition. Yet, other sectors (e.g., nuclear in France and the UK) may remain domestic and state-controlled.

It also should be recognized that competition in defense programs in Europe is likely to be somewhat different than it is in the United States. For example, European nations, with constrained funding, are unlikely to run competitions with multiple companies as late into the system development process as is normally done in the United States (i.e., with the multiple prototypes, fly-offs, successive “down-selects” and so on). Maintaining multiple firms through numerous development phases is beyond the budgets of most European countries. Where nations are pursuing a program alone, they are more likely to hold competitions and make awards on the basis of “paper” studies. Also, at times the competitions are also likely to be less formal in character in the United States; often these are assessments of products already developed by the United States or other nations.

A Shift Toward European Cooperative Buying. Finally, the data reflects a significant shift over the years toward more cooperative European programs such as the Eurofighter. As shown on Figure 28, there has been a dramatic increase in the percentage of European cooperative (multinational) programs by value. While only 20 percent of legacy programs were cooperative (see Figure 27), fully 50 percent of new programs are cooperative. The data thus reflects economic realities—most European nations cannot afford to go it alone in major new systems, and have pursued large system or platform buys in a cooperative multinational setting, where risk, resources and work may be split among firms/nations and may not be awarded by competition.

European cooperative buying in and of itself is not necessarily problematic from a market access standpoint. Indeed, cooperative buying can produce significant savings, can avoid duplication of effort and can generally create larger programs with opportunities for contractors and subcontractors. As discussed in detail below, however, the combination of cooperative buying and *juste retour* policies have created a situation where there is little competition at all on cooperative programs and American firms are effectively excluded from significant participation in this growing category of European buying. With countries seeking to have their investments in these programs spent at home under strong *juste retour* policies, there is no real room for U.S. participation.

Country-Specific Circumstances in Continental Western Europe

Within continental Western Europe, Sweden, France, Germany and Italy are in very different positions (although France, Germany and Italy score relatively similarly for reasons discussed below):¹⁶

- **Sweden** receives by far the highest score in this arena. Under Sweden’s new acquisition strategy, only designated legacy systems and modifications are awarded sole source. Approximately 20-30 percent of all procurements by Swedish Defence Materiel Administration (FMV) are open for bid by all companies, foreign and domestic, and an additional 20-30 percent of FMV’s purchases are procurements under cooperative programs with an international component. A review of newer FMV

¹⁶ See Volume II of this study for detailed reports on each country in the study.

major program awards shows that a larger share—some 72 percent by value—was competitive. Additionally, Swedish officials have stated, and both domestic and foreign firms confirm, that FMV procures to meet military needs, and not to protect Sweden's industrial base. Consequently, non-Swedish defense firms have competed successfully in open competitions.

- **France**, despite its clear history of largely sole source national awards, is plainly changing acquisition policies in a constructive direction, reflected formally in writing and in recent practice. France is gradually moving to more competitive bidding on programs. Under its new policies, however, U.S. market access will still be limited because of the way France is organizing its market. Specifically, under these new policies, France will: 1) maintain national sources (presumably sole source) for a small range of needs (e.g., nuclear); 2) buy largely European (but on a competitive basis) on a broader range; and 3) allow the United States and other non-European bidders to compete for other procurements. While the data on recent new sales reflects a clear shift to European buying, it shows only a modest movement toward competitive buying. Yet, anecdotal evidence on pending programs does confirm this movement.
- **Germany and Italy** also have a track record of relying largely on national, sole source suppliers, and have not developed significant new policies designed to foster open and competitive procurement. Germany today still has a high level of sole source buying even on new programs (46 percent). Moreover, in these countries, the extent of domestic work share continues to be significant buying criteria in some procurements. Procurement decisions are in part made on the basis of maintaining local capability and jobs rather than solely on considerations of needs, capabilities and costs in some cases. However, notwithstanding the lack of expressed policy shifts in these countries, the actual “new” purchases made by both countries on major defense programs does show a clear shift toward more competitive buying (with 40 percent of new German sales and 71 percent of new Italian sales awarded on a competitive basis in the last few years). Moreover, we believe that the economics of constrained budgets, the requirement to implement the new EC Defense Procurement Directive, and the reality of cooperating in an increasing European Security and Defense Policy framework will gradually drive them toward “better value” buying over time. Paradoxically, U.S. suppliers have traditionally fared better in Germany and Italy than in France. Where these governments seek developed capability, they have in the past often acquired systems from the United States on a sole source basis. In contrast, France, with its larger defense budget and more capable industry, has tended to source these systems primarily from its own suppliers.

Better Continental European Buying Does Not Necessarily Lead to More U.S. Opportunities

Ironically, the evolving more competitive framework and other better buying practices in continental Western Europe may not necessarily translate to better opportunities for U.S. suppliers for several reasons:

- First, European purchases that in the past were made on a sole source basis to U.S. firms are now more likely to be competed—with stronger European firms (e.g.,

EADS, Thales) and other third-country (e.g., Israeli) offerings being considered as well. In light of the number of alternative suppliers and their increasingly competitive offerings, it is by no means a sure thing that the U.S. supplier will be selected.

- Second, the formal and informal policies of national procurement authorities in Europe are increasingly favoring “European” solutions. This trend is clearly reflected in the data on major program buys by continental European firms studied. As shown on Figure 30, the new procurement awards overall in continental Europe are dominated by European buying. Specifically, European suppliers received 93 percent of all new continental European awards, including, viewed cumulatively: in-country sales to national European suppliers (27 percent); sales to suppliers from other European countries (14 percent); and sales on European cooperative programs (51 percent). In contrast, only 7 percent of new awards made to U.S. firms. *The data thus suggests that U.S. firms are effectively excluded from a considerable portion of competitive European awards.* While it is difficult to ascertain what percentage of competitive awards are closed to U.S. firms, the figure is probably sizable; with the depth of U.S. capabilities and our ability to offer competitive pricing in light of economies of scale, one would assume that our firms would do considerably better in a truly open and competitive market.
- Third, as defense industrial consolidation moves forward in Europe, there inevitably will be powerful incentives for national buyers to favor the remaining, very large European firms. Without such “home market” European sales, these firms may find it difficult to sustain the economies of scale and technology investment needed to maintain a credible presence in a given market area. Thus, the desire to maintain an autonomous European set of capabilities will very likely favor European buying tendencies.

Thus, somewhat paradoxically, the opening of national markets in Europe may make the landscape more, rather than less, challenging for U.S. defense firms seeking to access these markets.

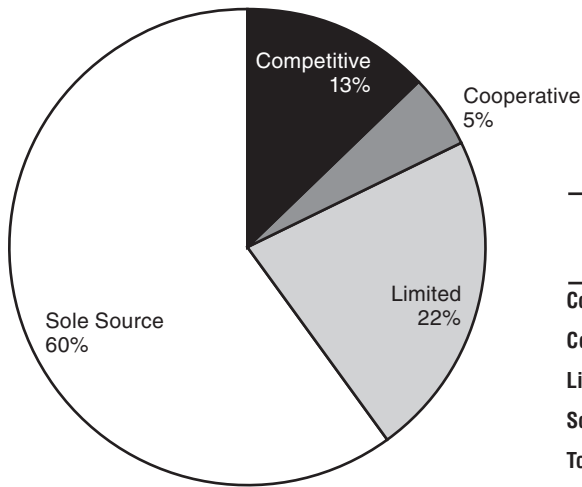
The United States: Considerable Competition With Foreign Exclusions

In the United States, there long has been a competitive procurement system—with multiple bidders for each award and two or three suppliers (or teams) often carried through to later phases of a program. Nevertheless, the United States scores relatively low on “open” competition because there has been liberal use of restrictions (formal and informal) to exclude foreign prime level contractors from the bidding process in many instances.

Anecdotal evidence and recent program awards indicate that this is changing—i.e., that foreign suppliers are excluded less than in the past and that teams with major foreign participants can compete for new system level awards. Foreign suppliers report that there are fewer programs than in the past where procurements are totally closed to their participation. But there is no clear or coherent U.S. policy in this direction (the movement is largely ad hoc), and the circumstances tend to vary from one program area to another.

The available data confirms this reality of “competitive but not that open” procurements in the U.S. defense market.

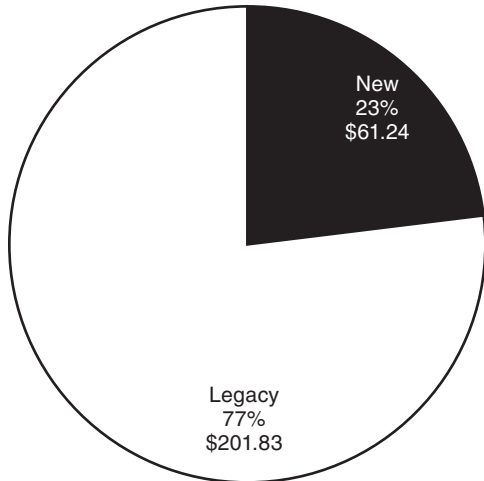
Figure 31 United States—Total Procurement by Award Type



	Value Millions of Dollars (\$)	Percent (%) by Value	Number
Competitive	34,414.41	12.6	41
Cooperative	14,942.86	5.5	11
Limited	60,292.98	22.1	40
Sole Source	163,064.75	59.8	140
Total	272,715.00	100.0	232

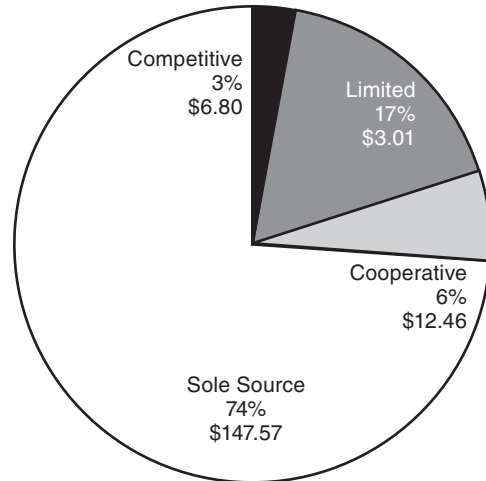
Source: Documental Solutions.

Figure 32 United States—Legacy vs. New Procurement in Billions of Dollars (\$)



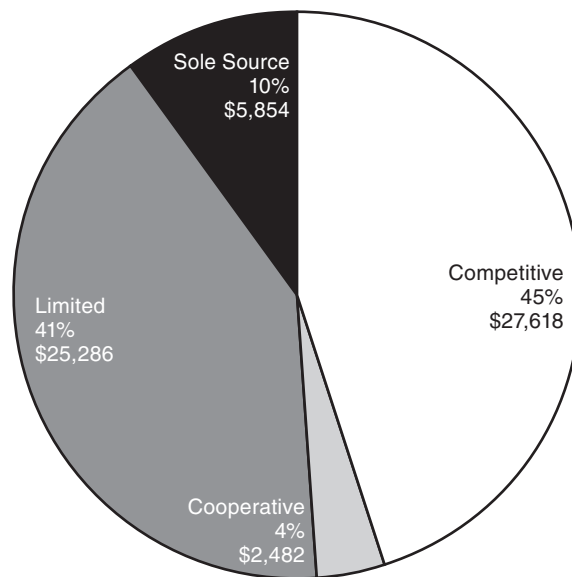
Source: Documental Solutions.

Figure 33 United States—Legacy Procurement by Award Type in Billions of Dollars (\$)



Source: Documental Solutions.

- **Most U.S. Department of Defense (DoD) Buying Is Competitive Except in Large Legacy Programs.** DoD's own statistics for 2006, the last year for which data is available, show that roughly 62 percent by value of *all* prime contracts (including commercial goods and services) were awarded competitively. However, as set forth on Figure 31, our more targeted look at major U.S. defense programs during 2006-2008 (both Procurement and Research, Development, Testing and

Figure 34 United States—New Procurement by Award Type in Billions of Dollars (\$)

Source: Documental Solutions.

Engineering programs exceeding \$100 million) shows that only 13 percent of all DoD buys were fully and openly competed. This reflects that DoD awards were dominated by large legacy programs, as shown on Figure 32. Indeed, even if awards competed but limited to U.S. sources are included, the total awards competed still account for only 36 percent.

- Most U.S. Spending Is on Legacy, Sole Source Programs.** Consistent with the pattern in most other countries in Europe, a large share of all U.S. spending in the last three years—77 percent or \$201 billion—have been on legacy programs (see Figure 32). Again, this reflects that large development and production programs, which take years to bring to fruition, are recipients of most DoD funding. Indeed, the C-17, F-35 Joint Strike Fighter, F-22 and C-130 programs—some started more than 30 years ago—receive the largest amounts of funding. Not surprisingly, the data also shows that the lion’s share of legacy spending—roughly 74 percent—is on a sole source basis for the reasons noted above. See Figure 33.
- New U.S. Major Program Buys Are Largely Competitive.** In contrast, the data on “new” major programs (i.e., programs that are newly started in 2006-2008) shows that most of the new buys—86 percent by value—were made competitively. See Figure 34.
- A Considerable Portion of New Buys Are Not Open to Foreign Competition.** As shown on Figure 34, above, we estimate that approximately 41 percent of new buys were awarded through “limited” rather than “open” competition (i.e., without foreign participation). Thus, between this area of limited competition and the U.S. sole source buying on new programs, approximately 51 percent of program dollars

were not accessible by foreign competitors. The data thus reflects a clear legacy of contracting officers and acquisition decision authorities using the discretionary authority available to them to deny foreign firms access to the U.S. procurement system (through the use of available rules—and with no need to justify excluding foreign sources). Informal exclusions are probably the most significant barrier to the U.S. market. It is less legal or regulatory in nature than institutional, cultural and decentralized—making it more difficult to address. While there is some sense among those interviewed that they are encountering less of this type of conduct now as compared to five and ten years ago, it nevertheless is still present to some extent.

- **Little Cooperative Engagement.** The data also shows a small percentage of U.S. buying (4-5 percent) devoted to cooperative programs, including most notably the F-35 Joint Strike Fighter and the Standard Missile.
- **Subcontract Buying Is Also Competitive.** While little direct data is available on subsystem awards, considerable anecdotal evidence indicates that there is a fair degree of competition there as well where the prime contractor on a program elects to actually compete the work rather than keep it in-house (i.e., make vs. buy).
- **Anecdotal Evidence of Changing Customer Behaviors.** As noted above, however, there is some evidence of changing attitudes toward foreign participation in U.S. defense procurement programs. This is reflected in a decreasing tendency, in practice, for programs to entirely close competitions to foreign suppliers. It also is reflected in several recent high-profile contract awards, notably the Marine One presidential helicopter, the Army Light Utility Helicopter (LUH) and the USAF Tanker Aircraft programs. In each of those cases, the armed services sought a non-developmental or limited development solution to an operational requirement, and opened the competition to significant foreign participation. On one level, these selections, made under best value criteria, appear to reflect that the individual DoD components are willing to seriously consider foreign firms for participation in its programs where they can provide significant advantage to the Pentagon.

These contracts thus suggest the salutary prospect that a Transatlantic defense market could evolve, with Transatlantic teams bidding against each other and the winner selected solely on the basis of best value rather than on nationality or where the jobs will go. Yet, the significance of these decisions for the Transatlantic defense relationship must be tempered on several grounds. First, this changing attitude is not universal and there is no coherent, across-the-board attitude to encourage foreign participation. Second, the winning teams in these awards recognized that a significant portion of the value of the program must be provided in the United States. Thus, in all three cases, substantial content is U.S.-based, with EADS opening manufacturing facilities in the LUH and tanker case. Third, the reality is that in all three programs the foreign participant is only providing essentially a green-field operation in the United States based on an existing European commercial platform and not a full-up defense system as such. The defense-related work on Marine One (with many sensitive systems and subsystems) and the tanker will all be done by U.S. firms at U.S. facilities. Thus, these are not cases where the Pentagon is truly willing to rely on a foreign defense system fully for major needs.

3. Fair and Transparent Procurement Process

Overall, the United States and Western European countries examined have reasonably fair and transparent procurement processes and do not appear to directly discriminate on a national basis. Country-specific scores are set forth on Table 4.

Table 4 Fair and Open Procurement Process—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Fair and Transparent Procurement Process	1.00	0.80	0.70	0.50	0.60	0.50	0.95	0.95	0.80
Transparency of Process	0.50	0.45	0.40	0.25	0.30	0.25	0.50	0.50	0.40
Fairness of Process	0.50	0.35	0.30	0.25	0.30	0.25	0.45	0.45	0.40

- Sweden and the UK are notable for their very transparent processes and policies.** The governments publish clear statements about their defense market and industry goals and the thinking behind their strategies. Their acquisition policies and decisions are publicly available and easy for bidders to access. Both countries have significant information on their defense budgets, markets and contract opportunities available on publicly accessible websites. Moreover, according to market participants, these governments largely implement their processes in accordance with their public pronouncements—the hallmark of transparency.
- The United States and France score reasonably high on this metric as well.** Both nations have extensive public information on defense and industrial strategies and acquisition planning, budgets and contract award decisions. The new French *Livre Blanc* lays out priorities—from military force size and structure to the most critical industries and buying implications. The U.S. DoD is well-known for the transparency and broad public availability of data on its defense programs and buys, and U.S. defense firms also maintain richly populated open websites. However the DoD did retrench on the open nature of its public data after September 11. Moreover, the sheer size, scope and complexity of the U.S. system is daunting to potential market participants—even many U.S. firms have difficulty navigating the DoD acquisition system, and commercial firms often opt out. There are numerous affected constituencies and DoD components involved in a successful marketing effort. Hence, we have marked the U.S. system down on this basis.
- Germany scored slightly lower.** In general, the German defense procurement system is relatively transparent and Germany has published several recent strategy documents. A joint Ministry of Defence-industry document on the German defense industry also is available publicly. Based on interviews with market participants, however, the German system has fewer formal written policies and relies more heavily on a more informal set of requirements for doing business in practice.

- **Italy scored much lower than the other Western European nations, and on par with Romania.** Italy stands out as a nation that has a relatively opaque process with less developed and more informal requirements. Italian acquisition processes and procedures are not widely published and easily understood via publicly available sources. Further, Italy's process for defense program and budget approvals has a very strong political element, in part due to the atomized nature of political parties and their power, as well as the limited budgets and strong indigenous jobs focus. Yet, Italy—while bureaucratic and slow—is capable of ably managing its acquisition programs and systems. It is a longstanding member of North Atlantic Treaty Organization (NATO) and has worked on many programs with the United States over the years. So while Italy may have a political dimension to its program approvals, Italy is capable of establishing and managing its participation in a complex program like the F-35 Joint Strike Fighter—which cannot be said today with respect to Romania.
- **The procurement systems of Poland and Romania, like other countries in Central Europe, are works in progress, although Poland has made significant progress.** While the rules are modern and transparent, the systems require additional trained personnel to operate effectively and require excessive time to move programs forward—with numerous problems encountered along the way. While both nations are committed to reform their procurement requirements under the terms of their accession to the EU, this will undoubtedly be a multiyear process (especially for Romania).

Romania has struggled more than Poland in its efforts to implement new acquisition regimes due in part to serious bureaucratic challenges and inefficiencies, lack of expertise, and lack of understanding and coordination between the Armaments Department and industry. *There is a significant difference between the acquisition capabilities and implementation today in Romania and those of the long-term NATO members.*

At this point, the new processes of both Poland and Romania are in fact still being tested. The Poles and Romanians are getting assistance in their procurement processes and management for DoD in the context of specific Foreign Military Sales (FMS) programs. The largest U.S. sales to Poland and Romania have been made through the FMS mechanisms—as either FMS sales or as FMS credit (e.g., the F-16 for Poland, and various products in the case of Romania). In FMS programs, a considerable amount of program and general acquisition management is provided by DoD; the buying nations pay a surcharge for the FMS management by U.S. DoD employees. This DoD management significantly augments the Polish and Romanian oversight and control of these large programs.

In contrast, most of the Western European nations we examined buy little via FMS channels today except where required by the United States in the case of a new, sensitive platform, sensitive technology or closely controlled products. Nations with significant internal capabilities and developed acquisition systems of their own generally do not wish to buy via FMS. They tend to have well established legacy systems, programs and operations into which they will to integrate their new additions—and they are quite capable of doing this themselves.

4. Domestic Content Requirements

Mandatory domestic content rules are not major impediments to access to the defense markets studied. More generally, increasing reliance upon commercial off-the-shelf products, most of which are manufactured or assembled in a global supply chain, has undermined the rationale for domestic content laws and made them somewhat less relevant as market access impediments.

Europe: A Focus on Informal Work Share Requirements. The European nations studied do not have mandatory domestic content rules and increasingly do not direct work share to particular domestic firms. As noted above, historically such rules were not needed as a tool for procurement authorities because they made awards largely on a national sole source basis.

Implicit Work Share and Offset Practices: Two Sides of the Same Coin

Many European nations today meet their needs for domestic content through some combination of informal or implicit work share requirements and traditional offsets. The term “informal” work share refers to government requests (typically extra legal in nature). The term “implicit” work share refers to situations where governments do not directly ask for work share but market participants voluntarily offer domestic work share knowing its importance—an increasing phenomena.

The informal work share and offset practices really are two sides of the same coin and they are interrelated. Foreign firms count their direct local work share and partnering on a program as a part of its offset offering. We address the informal content domestic content requirements below and offsets separately in the next section.

In effect, the prevalence of these types of “mirror” practices—informal or implicit work share and offsets—reflects a truism worldwide: governments prefer to spend their R&D and procurement funds at home to the extent possible. This preference, which is not surprising, reflects a mix of considerations, including: legitimate security concerns (e.g., concerns over maintaining operational sovereignty), anxiety over security of supply (and reliance on suppliers in other countries for critical items), and a desire to create local employment and build domestic technology leadership.

Distinct Patterns Emerging in Europe. Specifically, there are several distinct emerging patterns in Europe that indicate a shift toward more informal domestic content requirements in some countries while offsets remain the tool of choice in others:

- In some of the larger countries (the UK, Italy and France), there is growing use of less formal requirements or “goals” for onshore noble (high value, desirable) work, onshore production, partnering with local firms, retention of intellectual property (IP) where government resources are used, and similar means that effectively require domestic content. In effect, foreign firms are required to have some local

participation in performing their contract. These informal requirements are typically expressed as core elements of national defense industrial policy. These informal requirements are often in the nature of performance requirements for foreign investments (e.g., host government requirements that an investor commit to certain steps such as introducing technology, hiring local personnel, etc.), many of which are precluded under international trade and investment agreements.¹⁷

- In smaller Western European countries like Sweden that cannot really demand local participation (and may not have firms with relevant capabilities), their social and economic goals are met through offsets (see discussion below).
- Finally, in Poland and Romania, their stringent offset laws, discussed below, effectively push foreign companies into assigning work share to domestic companies as the path of least resistance toward meeting offset obligations. This has the net effect of mandating a high degree of domestic content in many programs.

A Changing Definition of “Domestic” in Europe? Notably, there is an emerging shift in Europe over what is “domestic” — as new policies in France, Sweden and Italy express an emerging priority for “European” solutions over national solutions except in a narrow range of market areas (e.g., nuclear capabilities). However, this expressed “European” policy preference does not appear to have replaced the desire for some domestic participation or content in their programs. In other words, there is no indication that a firm getting an award in European country A can meet customer informal domestic work share requirements or preferences, as the case may be, through offering work share in European countries B and C rather than at home. Whether such a shift in attitudes will be reflected in practice remains to be seen. It will require governments to take the view that, as European “centers of excellence” emerge, reliance on solutions made elsewhere in Europe is acceptable in lieu of national jobs, technology and manufacturing capability. Some countries, like Germany, continue to resist such an approach.

U.S. Domestic Content Laws and Work Share “Requirements.” *The United States is the only country studied that has formal domestic content laws, but they have been largely waived for NATO Allies.* Specifically, the Buy American Act is the leading U.S. law that mandates a preference for U.S. goods and services in U.S. government procurements. However, for all of the European nations studied except Poland and Romania, the United States has waived most of these rules in practice under reciprocal procurement MOUs. The Berry Amendment, which establishes a preference in procurement for certain domestic products (food, clothing and fabrics), has not to date been waived through bilateral agreements. However, the Secretary of Defense does have waiver authority for specific circumstances, and a recent amendment to the Berry Amendment eases U.S.-origin specialty steel requirements for purchases of large, non-modified commercial items. Moreover, in 2005, Congress authorized the Secretary of Defense, under specified conditions, to waive any U.S. law or rule that would unnecessarily impede getting needed products rapidly to the field to meet combat exigencies. This includes restrictions on procuring from foreign sources of supply. Thus, in the United States, despite constant Congressional Buy American pressures, formal domestic content rules are not by and large a major factor in defense markets. They are more important symbolically than in practice.

¹⁷ See generally *Foreign Direct Investment and Performance Requirements: New Evidence from Selected Countries*, United Nations Conference on Trade and Development, United Nations (New York And Geneva, 2003).

In contrast, more informal or implicit domestic content requirements very much come into play where a European firm wants to bid as prime or major subcontractor in U.S. programs of size or importance. Customers do not often ask expressly for domestic work share but the desire for it is signaled in one way or another. These informal requirements come from “guidance” typically provided by someone in the program or budget chain — e.g., from program managers in DoD or industry, from Congressional district representatives or staff. Whatever the source, it is done on an ad hoc program-specific basis without a legal basis in most cases.

Thus, if the foreign firm wants to have a reasonable chance to win an award, certain work needs to be done onshore. As this is done outside of formal solicitations or competitive selection processes, the data on these demands is not available to study, although we have learned of such situations through interviews and our own experience. We believe that in most situations, foreign suppliers receive no explicit direction but are savvy enough to understand the steps they must take for acceptance of their bids and make the decision to move or establish work onshore to maximize their prospect of winning the award.

The inherent institutional resistance to offshore sourcing also poses challenges where a U.S. prime seeks to work in partnership with a European teammate on a large program. The firms consider such matters as domestic work share in particular states and job creation and seek congressional, executive branch and public acquiescence. There are very real considerations when large investments of time and resources are at stake by foreign firms.

Country-specific practices are as follows in order of scoring from high to low (as shown on Table 5). As noted above, some governments that score well on this metric (e.g., Sweden, Poland, Romania) accomplish the same goal of investment in the local economy through offsets policy, as discussed below.

Table 5 Domestic Content—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Domestic Content Requirements	1.00	0.90	0.75	0.75	0.95	0.95	0.95	0.80	0.65
Buy National Laws	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.25
Implied Workshare Requirements	0.50	0.40	0.25	0.25	0.45	0.45	0.45	0.30	0.40

Sweden. U.S. and other foreign firms can compete in Sweden, a smaller country with a smaller defense industry, without local content, business presence or partnering, although partnering can help navigate the Swedish procurement system. As discussed below, Sweden largely relies on offsets for de facto domestic content demands.

Poland. Poland is open to foreign competition in its defense procurement, but has implemented a rigorous offset law that mandates a minimum of 100 percent offsets of contract face value and imposes severe penalties for failure to meet offset targets. This creates a de facto domestic content requirement.

Romania. The situation in Romania is similar to that in Poland although the Romanian offset law is somewhat less stringent.

France. When the Government of France seeks to buy U.S. systems such as missiles, it is often as an off-the-shelf capability. In these situations, domestic presence or partnering is generally not *required* (although it is always helpful in any case). In cases, however, where U.S. firms seek to penetrate the French market themselves, partnering is important. But notably, France's buying decisions are generally made on the basis of requirements and the best value solution. While offsets are an important factor (see below), France does not appear to make award decisions based on domestic content being offered.

United Kingdom. The UK Defense industrial strategy expressly encourages foreign firms to maintain a certain set of capabilities to remain onshore. It thus formalizes a preference that has been developing in practice for an onshore presence by prime contractors (especially in "noble work" that creates UK IP and high-end manufacturing) and partnering for subsystem work. Foreign firms can compete as primes in the UK provided that they come onshore.

Germany. U.S. firms need to partner with, and give work share to, German firms in order to meaningfully participate in the market (even for off-the-shelf capabilities and products). There also is a sense that Germany takes local work share into account in its award determinations to some extent (i.e., Germany does not acquire solely on the basis of legitimate national security needs).

Italy. Foreign producers seeking to compete meaningfully for major contracts have little choice but to partner with local firms. In most situations, the appropriate (and potentially only) partner is Finmeccanica. Such partners are counted toward meeting robust offset requirements. More than in other countries studied, there is a sense that Italy takes local work share into account as a criteria in its award determinations (i.e., Italy does not acquire solely on the basis of national security needs).

United States. Not surprisingly, the United States, with its domestic content legislation, scores lowest on this variable. As noted above, informal or implicit domestic work share demands are a factor in the U.S. market. In effect, U.S. domestic content policies are comparable to those of the UK. Notably, even firms from the UK, our closest ally, have found that they had to establish a U.S. presence in order to receive anything approaching national treatment and be positioned to win sizable or sensitive U.S. contracts. These firms (e.g., QinetiQ, Smiths Industries, BAE) also recognize the need to offer "made in whole or in part" in their U.S. facilities.

5. Offsets and *Juste Retour*

In the offset area, there is a clear difference between the United States and the European markets studied. The U.S. policy on offsets in defense trade is that offsets are "economically inefficient and trade distorting."¹⁸ Hence, all departments and agencies of the U.S. Government are barred from encouraging, entering directly into, or committing U.S. firms to any offset arrangement in connection with the sale of defense goods or services to foreign governments. As discussed above, the closest thing to offsets is the informal work share guidance from program managers, discussed above, that they would like a particular production

¹⁸ *Offsets in Defense Trade, Twelfth Report to Congress*, U.S. Department of Commerce, Bureau of Industry and Security) (Dec. 2007), p. iii. Available at: <http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/offsets/final-12th-off-set-report-2007.pdf>.

line or development to be onshore (which apparently is infrequently explicitly offered, yet implicit and essential).

In contrast, offsets continue to be a significant, and to some extent, expanding factor in European defense markets—with offsets growing as a percentage of the contract awarded in recent years. While offset ratios (the ratio of offset cost to system cost) tended to be in the range of 50 percent in the past,¹⁹ in recent years, offset ratios have risen considerably, and in some cases approached or exceeded 100 percent. In other words, the cost of offsets equals or exceeds the cost of the system itself. According the U.S. Department of Commerce's 12th annual report on Offsets in Defense Trade, offsets in the European countries studied ranged from 82-167 percent—figures high by historical standards.

Table 6 Offsets and *Juste Retour*—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Offsets and <i>Juste Retour</i>	1.00	0.28	0.20	0.20	0.03	0.27	0.17	0.29	1.00
Effective Offset Requirements	0.50	0.08	0.00	0.00	-0.17	0.07	-0.03	0.09	0.50
<i>Juste Retour</i>	0.50	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.50

Based on this data and our analysis of other available information on national offset policies, the country-specific scores for offsets and *juste retour* are set forth on Table 6.

In effect, based on interviews with government officials and market participants, there really are two groups of countries within Europe, with offset practices evolving in somewhat different directions.

- **In smaller Western European countries (e.g., Sweden) and Central European countries, offsets continue to be a significant mainstay and can be a considerable factor in procurement decision-making (i.e., the award of the contract may in part turn on the size of the offset package).** In Sweden, offsets are required on acquisitions above a certain dollar value, and they are used to maintain or develop core security competencies. Thus, countries like Sweden, Poland and Romania, which did not have formal or informal domestic content rules, effectively achieve the same goals through very sizable offsets.
- **In Poland and Romania, offset rules are relatively stringent, detailed and cumbersome and play a key role in award decisions (i.e., customers make decisions in good measure on the size and scope of the offset package).** Indeed, offsets in Poland averaged 167.7 percent of contract values in practice over the period 1993-2006 and offsets in Romania averaged 87.1 percent during the same period. Two of the most significant new programs for Poland and Romania are military fighters, awarded to Lockheed for the F-16 for Poland and yet to be awarded in the case of Romania. In each case, such “competitions” include significant offsets by the bidders and there is a sense that offset packages were key variables in the

¹⁹ “Offsets in Defense Trade 1996,” U.S. Department of Commerce, Bureau of Industry and Security, Executive Summary. Available at <http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/offsets/offsetsdeftrade96.html>.

award. In Poland, because offsets are considered a proposal evaluation criterion when foreign competitors are involved, actual offset packages can reach 200-300 percent of the face value. Moreover, Polish offset credits are awarded according to a multiplier formula that favors direct offsets through work share agreements with domestic companies, including state-owned defense enterprises. The Romanian offset law is slightly less onerous. Nevertheless it tends to favor direct offsets through work share to Romanian companies (including state-owned companies). In addition, Romania has a “pre-offset” requirement for all foreign competitors to establish an investment presence in Romania prior to bidding on defense contracts. The sense of market participants is that these large offsets have not created new jobs or fostered new technologies, but have largely functioned as a *de facto* domestic content law. Most foreign suppliers are required to direct their offset work to existing state-owned or controlled entities, which are almost totally dependent on offset work for their viability. This creates a continuous loop that artificially sustains inefficient capability.

- **In some larger Western European countries, including the UK, France, Germany, and Italy, offset policies and practices have become somewhat more flexible over the years.** There is less rigidity to the requirements, less formal follow-up on whether dollar-per-dollar commitments have been made in the immediate contract, and more balancing to meet requirements over multiple awards or projects. As noted above, these governments are encouraging local participation on major contracts (through local teaming situations or otherwise) and credit these partnering and other participation alternatives toward offset obligations. Nevertheless, still today, these countries are committed to offset approaches—informal or not. The UK has a specific organization devoted to “industrial participation” (their term for offsets) that assists in setting up and monitoring the obligations various firms owe to the UK and how they are met. Further, Germany and Italy remain particularly strong in their position; essentially 100 percent offsets are required and must be met.

Offsets: Pernicious Effects and Mixed Market Realities. Offsets are not only trade distorting and inefficient, but can be detrimental to the strength of the defense industrial base in the United States and other supplier nations, particularly small and medium-sized defense subcontractors. Offsets can displace U.S. and other subcontractors, enhance foreign competitors and create unneeded cost and excess defense capacity.

Consequently, the United States, the UK and a number of the major European defense exporting countries have longstanding concerns over offset practices—as their firms continually face growing and in some cases extreme offset demands. Nevertheless, there remains significant support for offsets among some nations, especially developing and transitional nations such as Poland and Romania.

Defense firms have tended to view offsets as a reality of the marketplace—necessary for a sale or beneficial in certain circumstances. With the decline of domestic defense demand in Europe, exports have become essential for the survival of most defense companies and offsets can be a competitive tool toward this end. Some U.S. firms believe offsets afford them a competitive advantage over foreign competitors as they have a better reputation for meeting their offset obligations. Indeed, a sophisticated set of financial transactions have developed around offsets (especially in the Middle East), with financial intermediaries using the fact of

offset requirements to create complex financial instruments that allow defense firms to meet their obligations and get credit while creating some valuable projects (typically commercial in nature) in the host country.

On balance, the elimination of offsets would be beneficial to the United States and its NATO Allies—improving the affordability of weapons systems, avoiding the creation of excess capacity, and bolstering the performance of subsystem suppliers that offer better solutions. Moreover, as more and more countries in Europe open their defense markets to competition, it is increasingly likely that offset demands will become a key to successful market entry. While countries may move more toward the use of more informal requests or arrangements for domestic partnering to ensure some benefits to the domestic industrial base, the reality is that this is an offset by another name. Thus, it will increasingly be important to curb this range of practices.

Little Progress to Date in Curbing Offset Practices. The dilemma, however, is that notwithstanding bilateral and multilateral discussions on offsets in multiple venues over the years, it has not proven possible to achieve a consensus on offsets. Indeed, there is little transparency about national practices and mixed enthusiasm for creating disciplines on offsets (i.e., to eliminate more onerous practices) let alone a consensus to eliminate them altogether.

- The United States and its trading partners had numerous discussions in the Organisation for Economic Co-operation and Development (OECD) over a number of years without achieving any concrete results.
- In 2007, the United States initiated a dialogue on offsets with the LOI 6 (France, Germany, Italy, Spain, Sweden and the UK) at its first meeting with the group; with European Defence Agency (EDA), as an observer; and with Australia. The idea was to seek to formulate a joint statement of Best Practices on offsets designed to limit the use of offsets and to encourage flexibility and equitable treatment for all participating nations (e.g., affording defense firms maximum flexibility in meeting offset requirements and avoiding more onerous, over-the-top, offset requests. While EDA and LOI 6 members generally shared the U.S. view that offsets are distorting, there was no agreement reached and a consensus that developing a statement of principles on best practices would be time-consuming and difficult.²⁰ There is no plan for further discussions at this time.
- In Europe, EDA has focused on the issue but has found it difficult to make meaningful progress on offsets because of its diverse membership (with both major defense supplier and buyer countries). EDA has had difficulty even gathering meaningful data from governments and has effectively put off any efforts to break new ground and this issue is on hold for the near future, according to EDA officials. On October 24, 2008, the EDA issued a new voluntary Code of Conduct on Offsets (the Code) designed to evolve toward more transparent use of offsets while reducing reliance on them. The Code applies to all compensation practices required as a condition of purchase or resulting from a purchase of defense goods or services and will take

²⁰ "Appendix H: Interagency Team Progress Report on Consultation with Foreign Nations on Limiting the Adverse Effects of Offsets in Defense Procurement," *Offsets in Defense Trade, Twelfth Report to Congress*, U.S. Department of Commerce, Bureau of Industry and Security (Dec. 2007), p. 139. Available at: <http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/offsets/final-12th-offset-report-2007.pdf>.

effect July 1, 2009. Under the Code, participating Member States agree to neither require nor accept offsets exceeding the value of the procurement contract. Given the need to adjust national policies, National Armament Directors agreed to defer the application of the 100 percent ceiling until October 15, 2010. It remains to be seen whether this limited set of disciplines will in fact curb offset practices within Europe.

- At this writing, the new EC Defense Procurement Directive approved by the European Parliament, once implemented, could potentially affect offset regimes in the future. The new Directive expressly disallows a subcontractor to be discriminated against based on the national origin of that subcontractor—making it very hard for a procurement authority to mandate a national source during the contract award process. Further, there is the overall question of how a nation can meet the new EC Defense Procurement Directive’s obligations, and apply its criteria for competition and contract awards, with offsets as part of the package or authorized procurement basis. This is discussed in detail in Chapter 5.

Juste Retour

A longstanding European practice is *Juste Retour*—i.e., the principle that work share received by participants in multinational defense programs will be proportional to national investments in the program. This practice traditionally has been a standard element of most European multinational programs. Eurofighter, the NH-90 NATO Frigate Helicopter, and the Medium Extended Air Defense System were all structured on this basis. In the past, this practice has been relatively rigid, with countries demanding that for every dollar put into a program they should directly receive precisely a dollar back. This creates enormous complexity and inefficiency because program participants and suppliers are often selected on the basis of nationality rather than best value. The result is typically the reliance on “second” or “third” best suppliers.

Unfortunately, the concept still is largely in vogue today in Europe. Governments generally continue to seek domestic work share for their dollars spent on cooperative programs for political and industrial base reasons. However, Europe is gradually moving toward somewhat “better value” approaches where work share is allocated over several programs or based on other more sensible principles:

- OCCAR (Organization for Joint Armament Cooperation), the European program management organization, has adopted the principle of “global balance,” whereby national work shares are balanced over *a number* of programs. This is designed to allow more flexible and efficient supplier selection, and it will be reviewed in three years to consider progress toward unrestricted competition. To date, OCCAR has attempted to implement this policy, but its portfolio is currently too small to achieve the desired result.
- EDA’s Joint Investment Programs in research and technology are being operated with the concept of “global modified *juste retour*”—meaning not direct work back for a specific type of investment, but overall work back into Member States, *balanced* to funds contributed by Member States over time.

These approaches reflect a desire to reduce the inefficiency of joint programs and to try to utilize particular firms on the basis of competence rather than on nationality.

Another creative Transatlantic effort is the F-35 Joint Strike Fighter model of cooperation, wherein countries that invested at different levels in the program were afforded only the opportunity to compete for work share—which would be allocated strictly on the principle of “best value.” However, this widely acclaimed model of cooperation has been subject to criticism by European participants (particularly outside of the UK, which by the scope of its industrial participation to date is practically guaranteed significant work share). European companies complain that the playing field is not level, and European governments (or, in some cases, opposition political parties) complain that they have no guarantee that they will ever see a return on their capital investment. While Lockheed Martin, the prime contractor on the F-35, has strived to find roles for foreign subcontractors, there continually have been complaints and political pressures. The most frequent complaint is that European firms are not considered for so-called “noble” (e.g., high value) work on the program (largely driven by security considerations).

Anecdotal evidence on these cooperative programs shows a clear preference for European developmental solutions even where developed, more cost-effective U.S. solutions existed. For example, in 1999, Boeing was included, at the eleventh hour, as a consultant on the Matra BAe Dynamics’ Meteor team (but without meaningful work share) in an effort to offset U.S. government support for Raytheon Company’s alternative bid based on AIM-120 Advanced Medium-Range Air-to-Air Missile. A similar pattern emerged in the Galileo project, where U.S. firms have been consulted for their Global Positioning System expertise, but not provided meaningful work.

Significantly, the continued use of *juste retour* principles on European cooperative programs, whether program-specific or more “global” in orientation, effectively forecloses participation by U.S. firms in this growing segment of European defense spending. With the focus on finding appropriate work share for each European partner, European governments and firms appear unwilling or unable to allow open and competitive bidding for major elements of these programs and are unwilling to afford U.S. firms meaningful roles in these types of projects. Indeed, as discussed in Chapter 5, European cooperative programs are expressly exempt from the new draft EU Defense Procurement Directive competitive bidding rules. Moreover, a review of major European cooperative programs (see Chapter 4) shows very little evidence of serious U.S. participation.

Moreover, while OCCAR has its “better value” buying practices, to date these programs have been for European countries only. While OCCAR’s contracts are to be awarded on the basis of competitive bidding and there is no requirement for European solutions, each Member State will “give preference to equipment in whose development it has participated within OCCAR.”²¹ Also, bids from firms in non-Member States will require unanimous

²¹ *Convention for the Establishment of OCCAR*, between the governments of Belgium, France, Germany, Italy and the United Kingdom, Farnborough, UK, 9 September 1998.

agreement from participants in the specific program and will be subject to the principle of reciprocity (i.e., the supplier's market should be similarly open).

In short, in large part due to the use of the *juste retour* principle (either the older version or the newer, more "global" approach), this large arena of European cooperative programs is effectively foreclosed to American participation and competitive bidding. A response to this by European governments would be that the United States could obtain participation in these programs if it invests in them. As a practical matter, however, these programs typically are for European partners only and relate to capabilities that the United States already has developed.

6. Government Ownership and Control of Defense Firms

In recent years, there has been growing recognition worldwide that there is no legitimate need for government ownership or control of defense firms. It is now clear that a government can ensure that its national security and other governmental interests with respect to defense firms are met through tools other than ownership or control, including: 1) its role in setting budget levels; 2) government regulation (antitrust, industrial security, and a range of other laws and rules); 3) contractual understandings with private owners (in the form of "undertakings"); and 4) its role as buyer (including shaping procurement rules, making source selection decisions, and structuring contracts to set the terms of purchase).

Consistent with this logic and the changing economics of defense (including the post-Cold War budget drawdown), there has been a significant worldwide trend toward the privatization and restructuring of state-owned defense enterprises. This reflects growing understanding that the operation of government-owned firms is more prone to political intervention, and that government ownership decreases productivity and produces less efficient, second-best solutions.

Thus, the longstanding tradition of government ownership of major defense firms eroded during the 1990s—in Western European nations, former Soviet bloc nations and elsewhere. Leading Western European governments have privatized numerous of their defense firms, gradually subjected them to market forces, and have in large part moved away from using post-privatization "golden shares" as a management tool.²² This trend reflects the growing understanding that such direct mechanisms as ownership are not only needed to protect legitimate governmental interests, but have significant potential downsides and are generally inconsistent with the notion of putting defense firms on a market-oriented footing. These types of governmental intrusions into the operations of private firms and the uncertainty they create make it more difficult to attract outside investment needed for long-term growth. Direct governmental interference also can limit the firm's ability to participate in public capital markets.

²² "Golden shares" systems also are increasingly recognized as producing economic inefficiencies, impeding the sector's and the company's productivity, and creating obstacles to the development of joint-ventures with other companies. Particularly in the context of transnational consolidations and pan-European companies, "golden shares" collide with the flexibility required to attract investments and partners. They may result in the isolation of domestic companies, and their weakening in an increasingly internationalized industrial structure. See, e.g., J.-P. Maulny, T. Taylor, B. Schmitt, F.-E. Caillaud, *Industrial and Strategic Co-operation Models for Armament Companies in Europe* (2001), p. 191 (referring to the French military industry); John Millar, Symposium: Comparative Models of Privatization; Paradigms and Politics: Article: Social Limits to Privatization, 21 Brooklyn J. Int'l L. 213, 220 (1995).

The privatization of defense firms also has been accompanied by significant downsizing and streamlining—due in part to post-Cold War budget realities and in part to the need to put these firms on an economic basis in a market-based environment. From a global peak of 17.6 million in 1987, defense industries worldwide lost more than half their employment by the late 1990s.²³

Table 7 below provides the relative scores of each country examined with respect to the metric of government ownership and control of defense firms. While the countries studied here vary in their practices, the trend is generally in favor of continued privatization of defense industries and a declining government role in their management and control. Specifically:

- **The United States, Germany and Sweden** do not own or control their defense firms or have any golden share rights in them. In Sweden, the defense firms have now all been privatized while the Swedish Defence Research Agency, which conducts research in a range of areas, is still government owned. In the United States and Germany, there is a long history of private ownership of the defense industry. The U.S. government continues to own sizable arsenals, munitions plants, laboratories, depots and maintenance facilities that constitute a relatively small percentage of the U.S. defense industrial base. While there is some evidence that arsenals and munitions plants (some company operated) are better managed today, the overall sense is that these facilities have tended to be inefficient, bureaucratic and unable to facilitate innovation. There is little consideration of privatizing the substantial laboratories, which do not engage in commercial viable work, and there continues to be resistance to privatizing work done at depots and maintenance facilities. In Germany as well there is resistance to the privatization of depots and support facilities.
- **In the United Kingdom**, defense firms have now been privatized. The UK has even privatized portions of its state-owned laboratory (now known as QinetiQ Group) and sold off most of its holdings in the British Nuclear Fuels Group (BNFL), its nuclear development and management firm. However, the UK has maintained golden shares in several of its major defense firms—BAE Systems, Rolls Royce, QinetiQ and BNFL, etc.; these golden shares include restrictions on the percentage of equity interests an individual foreign investor may hold in these firms. The UK also owns several shipyards and related facilities; some of these remain Government owned and contractor operated.
- **France and Italy** score lower because they have only partially privatized some of their major defense firms. They continue to hold significant, albeit minority, shares in leading defense firms—e.g., Thales and EADS in France and Finmeccanica in Italy. They also hold a majority of shares in other firms (like GIAT in France and Fincantieri in Italy). France has stated more directly than Italy its intention to gradually privatize these firms but that this will take time. While there is some sense that Italy will also continue to gradually privatize these firms, the pace of remaining privatization is slow and the government is likely to retain some interests for the foreseeable future. Moreover, both countries maintain such golden shares or similar arrangements that afford them at least veto power over major decisions (sales

²³ *Conversion Survey 2000: Global Disarmament, Demilitarization and Demobilization*, Bonn International Conversion Center (2000).

of strategic assets, etc.), and there are no signs that such golden shares are being phased out. In both countries, however, government officials and market participants confirmed that the governments are playing increasingly smaller roles in the management of these firms in practice—with no apparent role in normal management or operations.

- **Finally, in Central Europe, Poland and Romania** still own considerable portions of their defense industries, which historically have been large employers. In both countries, some state-owned firms (typically the more attractive and profitable ones) were sold off and the remaining ones were reorganized into large holding companies. Consistent with their overall privatization policies, both countries are in the process of selling their interests in these firms and putting them on a commercial basis; they are by and large not operating profitably today (with largely antiquated products and facilities) and are to a large extent government subsidized (both directly through sole source contracts and indirectly through offset-driven work share arrangements with foreign suppliers). These subsidies have hindered the types of reforms and restructuring needed to put these firms on a commercial basis. Therefore, many of these state-owned businesses remain unattractive to buyers for a number of reasons.

Table 7 Government Ownership and Control—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Government Ownership and Control	1.00	0.65	0.95	0.60	0.50	0.45	0.95	0.80	0.95
Government Ownership	0.50	0.35	0.45	0.30	0.25	0.20	0.45	0.45	0.45
“Golden Share” Provisions	0.50	0.30	0.50	0.30	0.25	0.25	0.50	0.35	0.50

7. Foreign Direct Investment

An important metric is the degree to which foreign firms are permitted to buy defense industrial assets. A foreign firm seeking to compete in a defense market can use investment as a means of “buying” market access—through ownership of a local firm with connectivity to the customer, presence on programs and capabilities.

As shown on Table 8, there is a wide variation in the willingness of the countries studied to allow foreign direct investment in domestic defense firms.

Table 8 Foreign Direct Investment—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Limits on Foreign Direct Investment	1.00	0.60	0.40	0.40	0.70	0.60	1.00	0.70	0.60

Specifically, the scores of each country in order are as follows:

- **Sweden and the United Kingdom** are the most open of the countries studied. They have both allowed significant foreign (especially European) ownership of defense firms and have relatively open and transparent processes. They also impose relatively unobtrusive restrictions on foreign ownership, focused on the protection of classified information and assuring some role for local nationals in the governance of their firms. Sweden is rated highest as it has more foreign-owned defense firms and imposes fewer restrictions on foreign owners (i.e., no golden shares or similar limitations). In contrast, while the UK has allowed continental European firms to buy significant defense firms (Thales bought Racal, Finmeccanica bought AgustaWestland, etc.), the UK also has maintained investment restrictions through golden shares in its major defense firms (discussed above). These golden shares expressly limit the percentage of shares an individual foreign investor may hold in these firms. While there is relatively limited U.S. ownership of defense firms in the UK other than General Electric's recent ownership of Smith's Aerospace Industries (see Chapter 4), British government officials have over the years informally indicated a willingness to allow large, key British defense firms to come under U.S. ownership.
- In **Poland and Romania**, the governments generally maintain an open investment policy and have allowed foreign acquisitions of its defense firms. The difficulty in attracting foreign investors is largely a reflection of the relative unattractiveness of the defense properties and the difficulty in conducting Western-style due diligence and negotiating sensible commercial arrangements. While these countries have made major changes in transitioning toward Western legal and market structures, improving the overall investment climate—marked by corruption, oversized bureaucracy, inefficiency and limited judicial recourse—will take some years.
- The **United States** (with a similar score to Poland and Romania) is an interesting case with a mixed record on process and policy but in the end a track record for allowing significant foreign ownership of U.S. defense assets (although the total under foreign control is still relatively small in percentage terms). In short, it is now plain that foreign ownership and investment is increasingly a means to buy access to the lucrative U.S. defense market.

Foreign acquisitions of existing U.S. defense firms have long been subject to review by the U.S. Committee on Foreign Investment in the United States under the Exon-Florio provision of the Defense Production Act, as amended, and the President has the authority to suspend or prohibit such an acquisition when it is determined to “threaten to impair” U.S. national security. This authority is more overt than those in other countries studied and is often pointed to as protectionist. In practice, while few acquisitions have been formally prohibited, a number of potential acquisitions have been withdrawn without decision or simply not pursued due to a perception of restrictive U.S. policies. In some cases, senior U.S. officials have from time to time signaled that a particular proposed transaction would not be viewed favorably.

Different Administrations have had different attitudes on this issue. In the late 1990s, the Clinton Administration adopted an affirmative policy to promote defense supplier linkages in order to promote interoperability with coalition partners and competition in consolidating defense markets. During that time, several major Transat-

lantic acquisitions were approved. In the aftermath of September 11 and especially the Dubai Ports case, however, the Bush Administration adopted more restrictive policies (except with respect to the UK, our closest ally), and viewed defense supplier globalization more in terms of policy risk than of policy benefits. U.S. attitudes were also shaped by European opposition to the Iraq War, which limited American enthusiasm for acquisitions by French and German firms, for example.

Nevertheless, despite this more restrictive attitude, several sizable UK acquisitions by BAE Systems and others occurred during the Bush Administration (i.e., it continued a UK-friendly policy in this area) and more recently a large Italian acquisition (Finmeccanica's nearly \$5.2 billion purchase of DRS Technologies) was approved—the first significant non-UK acquisition of a U.S. defense firm in the last eight years. Moreover, numerous foreign defense firms have opened new or “greenfield” defense operations (which the President lacks authority to prevent under Exon-Florio). Moreover, as fully discussed in Chapter 4 below, an analysis of the footprints of foreign defense firms in the United States shows that U.S. defense firms with more than \$16 billion in revenues are now under foreign ownership; most of the major European defense firms have U.S. capabilities, including classified facilities. In short, despite European protests of a closed market, by sheer value of enterprises European firms have far more defense assets under their ownership in the United States than U.S. firms do in Western Europe.

- **Germany, Italy and France**, the other major countries studied in Western Europe, are considerably less open to the U.S. investment in their defense firms than the United States and Europe—by behavior, not by law. While each of these countries has a different type of review process (some more transparent than others), in all three there have been virtually no meaningful U.S. acquisitions of defense firms and no meaningful U.S. ownership of significant defense assets.
 - Germany put an Exon-Florio-like law in place in 2004 after public controversy over a U.S. equity firm's investment in a German shipyard. While German officials argue that there is only one denial under the new law, there are specific cases where the German government has discouraged U.S. investors from buying German defense firms.
 - In France, the law does not prevent foreign ownership of defense firms, the process is reasonably clear, and the French Ministry of Defense professes openness. However, the absence of any significant U.S. defense acquisition is telling.
 - In Italy, the foreign investment process is relatively nontransparent and the investment climate largely unattractive. Hence there has been little meaningful foreign investment in the Italian defense sector.

These realities may reflect to some extent the lack of U.S. interest in acquiring defense firms in these markets in light of the limited market size and other commercial considerations. Nevertheless, the combination of continued government ownership of leading defense firms in Italy and France and policy attitudes in all three countries clearly have been significant factors in this equation. Issues of sovereignty, security of supply, and jobs are major reasons for these restrictive policies.

Note that France and Germany have been more receptive to Franco-German cross-ownership than U.S. ownership of their respective firms. The EADS multidomestic firm is the poster child for this policy, and has both leading French ownership and a strong stake by Germany's Daimler and numerous strong German subsidiaries. MDBA Missile Systems also has both French and German interests. In contrast, there have not been large, notable acquisitions of defense firms in Italy by French or German companies. The relative lack of ownership by European peer nations reflects not only government policy but also the size of the defense market and attractiveness of buying businesses in that nation.

The creation of EADS and subsequent intra-European consolidation does appear to reflect a Eurocentric, or at least, Europe-first, approach to mergers and acquisitions. This attitude has long been prevalent in Europe and reflects a fear that European firms would be dominated by U.S. merger partners. European defense industrial leaders have long sought Transatlantic mergers only after Europe can get the pieces together in order to proceed on a more "equal footing."²⁴

Special Rules for Classified Businesses

In both the United States and Europe, governments do require special industrial security protections in connection with foreign ownership of firms with classified contracts.

In the United States, the National Industrial Security Program Operating Manual industrial security rules and processes are most advanced. Under these rules, there are specific arrangements that have evolved for majority and minority foreign ownership of U.S. defense firms, including proxies, special security agreements and the like.

At the core of these rules and structures are clear principles for foreign ownership of firms with classified contracts. These include:

- Limitations on foreign participation in governance of such firms—which can be achieved only through membership in boards of directors;
- The appointment of "disinterested" board members or "outside directors" to be in charge of security, who have a fiduciary responsibility to the DoD;
- The exclusion of foreign owners from access to classified information through physical and information technology safeguards; and
- Special procedures for visits to these firms by foreign owners.

The U.S. rules are cumbersome, costly and antiquated and limit the ability of foreign defense firms to obtain synergies and cost savings from U.S. acquisitions. Nevertheless, foreign firms are willing to live with these onerous and inflexible rules in order to obtain access to the lucrative U.S. classified market, and view such industrial security agreements as a "ticket" for admission.

²⁴ Comments to this effect were made by Manfred Bischoff, then CEO of EADS, and John Weston, then CEO of BAE Systems, at a Pentagon dinner on October 25, 1999, focused on Transatlantic supplier globalization. See, e.g., Robert Wall, "New Strategy Emerging for Transatlantic Linkups," *Aviation Week & Space Technology* Headline News (November 1, 1999). Available at <http://www.awstonline.com>.

In the European countries examined, these types of industrial security arrangements are generally less complex in nature and are generally handled as part of the overall governmental process of approving foreign ownership of defense firms. These issues are handled through “undertakings” agreed to between the firm and the government or procurement contracts themselves. In Europe generally, “ring fencing” is utilized (i.e., precluding foreign access to the classified information on particular programs) rather than limits on foreign participation in governance or visitation. European governments typically request that the CEO be a domestic citizen and, in cases involving more sensitive assets, also may request the same of some other board members and executives. Other commitments may be required on a country-by-country basis (maintaining facilities onshore, etc.). In general, however, given the absence of U.S. ownership of significant defense assets in most of Europe, the industrial security issues have not arisen that much in practice.

8. Ethics and Corruption

The scores of the individual countries examined on ethics and corruption are set forth in Table 9. Briefly, in reviewing this issue, we looked at both domestic compliance with law (i.e., the situation within the market) and the government’s attitude toward illicit payments by contractors in third countries (which, in addition to being illegal, create market efficiencies generally and also reflect on that country’s own view of compliance with law). In this area, there is continued evidence that corruption is a factor in defense markets worldwide. Nevertheless, it is difficult to obtain data specific to corruption in the defense market, although anecdotal data and examples exist. Hence, as explained in Appendix I (describing our methodology), we have assessed the climate for corruption domestically and participation in illicit payments abroad largely by reference to established indices published by such organizations as the World Bank and Transparency International (TI).

Table 9 Ethics and Corruption—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Ethics and Corruption	1.00	0.68	0.68	0.60	0.53	0.38	0.90	0.75	0.73
Bribery (Domestic)	0.75	0.53	0.53	0.45	0.38	0.23	0.68	0.60	0.53
Foreign Corrupt Practices (Tolerance)	0.25	0.15	0.15	0.15	0.15	0.15	0.23	0.15	0.20

Domestic Compliance with Law

In the United States and Western European countries studied generally, there is a strong internal commitment to the rule of law; internal bribery and corruption are relatively rare. There are criminal laws on the books in all countries, and blatant instances of internal corruption are usually prosecuted rigorously and to the full extent of the law. All of these countries scored strongly on the World Bank’s worldwide governance indicators except Italy, which scored lower because it has experienced some ethics and corrupt issues generally in its internal market (although nothing overt in the defense arena in recent years).

Not surprisingly, Poland and Romania scored lower because the commitment to the rule of law is less developed and the potential for bribery therefore increased. A combination of circumstances—including the extended period of communist rule when bribery was considered an ordinary cost of doing business, low-paid government officials, lack of transparency in decision-making and the like—create greater prospects that illicit payments will be requested for everything from setting up a business to securing defense contracts. Indeed, domestic businesses understand bribery as a normal aspect of conducting business. Poland is generally further along in addressing this issue than is Romania, where corruption is more pervasive.

Foreign Payments

There continues to be a mixed track record with respect to government tolerance for and business firms' propensity to make illegal payments in third-country defense markets.

Corruption has long been and continues today to be a material factor in global defense markets. While significant strides have been made in combating global corruption, these efforts have occurred largely outside of the defense world. There are virtually no defense-unique efforts to address the problem; Ministry of Defense officials in numerous countries as well as U.S. DoD officials are generally not aware of either the extent of the problem or the international disciplines that have been established and do not have institutional capabilities that focus on these problems. Nevertheless, the resulting international rules apply with equal force to the defense and aerospace industry.

The United States as the Driver of Change. Reported corruption in defense markets was in good part a driving force behind the initial establishment of anti-bribery rules. In the United States, the Foreign Corrupt Practices Act (FCPA, or the Act),²⁵ enacted in 1977, was in large part a reaction to public disclosure by the U.S. Securities and Exchange Commission (SEC) that more than 400 U.S. companies made “questionable” payments to foreign officials. The SEC confirmed more than \$300 million of these payments, including \$30.7 million by Northrop Grumman and \$25 million by Lockheed.²⁶ Indeed, one alleged Lockheed payment of \$1.4 million to the Japanese Prime Minister reportedly led to his imprisonment.²⁷

The FCPA criminalized the bribery of foreign government and political party officials by U.S. firms and other persons subject to the Act. As a result, U.S. companies, including all major defense contractors, have made compliance a priority and have established detailed corporate ethics guidelines—with robust procedures, internal controls to ensure that procedures are effective, and penalties for noncompliance, including employment termination.²⁸ In effect, a culture of ethical conduct has emerged. U.S. defense firms and U.S.

²⁵ Pub. L. No. 95-213, 91 Stat. 1494, codified at 15 U.S.C. __78dd-1 and 78dd-2.

²⁶ Securities and Exchange Comm'n, Report on Questionable and Illegal Corporate Payments and Practices, 94th Cong., 2d Sess. 1 (Comm'n Print 1976). The payments by Lockheed were considered particularly troubling at the time because the federal government had recently given Lockheed federal loan guarantees, thus creating the appearance that the U.S. government had subsidized Lockheed's payments. See Donald R. Cruver, *Complying With the Foreign Corrupt Practices Act: A Guide for U.S. Firms Doing Business in the International Marketplace*, p. 5 (1994).

²⁷ 134 Cong. Rec. S9617-18 (daily ed. July 14, 1988).

²⁸ For a list of illustrative corporate compliance programs, see, e.g., “*Business Principles for Countering Bribery: Guidance Document*,” Transparency International, p. 67. Available at: http://www.transparency.org/content/download/573/3493/file/bpcb_ti_guidance_doc_november_%202004.pdf.

firms in other industries compete abroad based on the quality and price of their mousetrap and advocacy support from the U.S. government—and for the most part not through the use of illicit payments.

Nevertheless, the incentives to make illicit payments still operate in defense markets. For example, in 1995, Lockheed—ironically one of the firms whose payments led to the FCPA's original enactment—pleaded guilty to conspiring to pay \$1 million to an Egyptian lawmaker to obtain business for Lockheed and then disguising the payment from U.S. officials.²⁹ To settle these charges, Lockheed paid \$24.8 million—one of the biggest fines ever under the statute.

The enactment of the FCPA created an unlevel playing field for U.S. firms bound by the Act. Other countries not only did not have similar laws outlawing foreign bribery, but in some cases allowed their firms to deduct bribes from corporate taxes. Moreover, the U.S. government recognized that the foreign payment practice is pernicious in many respects; it interferes with efficient trade and investment and undermines the development of accountable democratic and market-based economic institutions.³⁰

Consequently, the United States became a leader in the effort, begun soon after the Act's enactment, to internationalize its anti-bribery provisions. This ultimately resulted in the signing in December 1997 of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (Anti-Bribery Convention, or the Convention) by major exporting nations (including all 30 OECD members and 4 non-member nations). The Convention, a major milestone in the effort to curb global corruption, subsequently entered into force in February 1999. Separately, the OECD adopted recommendations at the ministerial level that members should end the practice of allowing tax deductions for foreign bribes.

The OECD Convention and International Anti-Corruption Standards. The Convention, which largely tracks the U.S. FCPA, requires its parties to, among other things: 1) criminalize the bribery of foreign public officials in the conduct of international business, including payments to government-controlled enterprises; 2) apply “effective, proportionate and dissuasive criminal penalties” to those who bribe; 3) establish liability of “legal persons” or impose comparable civil sanctions or fines; 4) make bribery a predicate offense for money laundering legislation; and 5) improve accounting procedures.³¹ The Convention also has a unique “peer review” mechanism for compliance.

Since the Convention's entry into force, 37 countries, including all of the major defense exporting nations, have now enacted implementing legislation. Indeed, today the United

²⁹ Andy Pasztor, “Lockheed Pleads Guilty to Conspiring to Violate Anti-Bribery Regulations,” *Wall Street Journal*, Jan. 30, 1995, p. B6B. 3 FCPA Rep. 699.176.

³⁰ For a full analysis of the costs and risks of corrupt payments, see Bialos, Jeffrey P. and Husisian, Gregory, *The Foreign Corrupt Practices Act: Coping With Corruption in Transitional Economies* (Oceana Pubs., 1996).

³¹ The Convention also has strong provisions to prohibit accounting omissions and falsification (including off-the-books accounts and similar practices to facilitate or hide bribes), and to provide for mutual legal assistance and extradition. Specifically, the OECD Anti-Bribery Working Group reviews both: (a) whether laws enacted are consistent with the Convention; and (b) whether laws are being implemented. While the Convention is an important milestone, it left some areas uncovered. Of most significance, because of different jurisdictional principles that signatory countries utilize, the Convention can and has been interpreted so that foreign subsidiaries of domestic firms are not covered by its terms. This loophole opens the prospect that senior management of a company in an OECD country could “bury their heads in the sand” while payments are made out of offshore subsidiaries. Also, the Convention does not directly cover bribery of foreign political parties, party officials, and candidates for office.

States and all of the European nations examined except Romania are parties to the OECD Anti-Bribery Convention, and have enacted implementing legislation.³² Most of these governments have taken some actions to enforce their laws, with a number of prosecutions. Countries have also worked to correct deficiencies in their laws and enforcement practices highlighted in publicly available OECD progress reports. In general there is more sunshine in this area than in the past.

The Mixed Record in Europe. Nevertheless, tolerance for foreign corrupt practices varies within the Transatlantic community. Based on our review of publicly available data and interviews with market participants, we have ranked the various countries as shown on Table 9.

In general, the following differences emerge:

- France, Germany, Italy, the United States and Sweden have enacted reasonable legislation and taken significant enforcement actions, according to TI, the leading watchdog group for foreign payments.³³ There have been very public arrests and prosecutions in some of these countries.
- In contrast, TI found the United Kingdom to have an unacceptable record in light of its sustained failure to enact legislation correcting deficiencies in its anti-corruption law, its failure to prosecute foreign bribery, and its premature termination of its investigation into bribery allegations against BAE Systems with respect to the large Al Yamamah project in Saudi Arabia. According to these allegations, BAE Systems made very large illicit payments to Saudi officials on the project—billions—with the knowledge of the UK government.
- In Poland and Romania there have been arms trade issues of a different nature in the past—illicit arms transfers to third-world countries and associated payments to foreign officials or businesses. Both nations have worked on addressing these concerns and have made serious strides. With respect to Poland today, which has little foreign arms trade, there is no available evidence of Polish firms making illicit payments abroad. The situation is much the same in Romania, whose principal arms exports are small arms and ammunition. However, in the broader national context, a wide range of corruption issues remain in these two nations.

The European defense industry's track record for compliance efforts is also a work in progress. Numerous large European defense firms, like their U.S. counterparts, have put in place programs to comply with anti-bribery laws and have been more focused on this issue in recent years. In 2006, with allegations of bribery swirling (especially the BAE Systems issues), the European defense industry's lead trade association created a working group dedicated to battling corruption.³⁴ On the same day, the UK defense industry announced the formation of the UK Defence Industries Anti-Corruption Forum and its leading defense companies and trade associations made a written commitment to promote best practice in

³² Romania has not yet fully implemented the reforms needed to qualify for membership in the Convention.

³³ Fritz Heimann and Gillian Dell, *Progress Report 2008: Enforcement of the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions*, Transparency International (June 24, 2008), p. 9. Available at: http://www.transparency.org/news_room/in_focus/2008/oecd_report.

³⁴ See ASD Press Release July 14, 2006. Available at: <http://www.asd-europe.org>.

anti-corruption.³⁵ Since that time, the European defense and aerospace industry has developed and signed onto a set of common industry anti-corruption standards.³⁶

The recent corruption scandal involving Siemens AG also may bring new public awareness to the issue and enhance compliance by European firms with anti-bribery laws. The Siemens scandal involved senior managers establishing slush funds in shell companies used to pay bribes to foreign officials in order to secure orders. Siemens recently agreed to pay a \$1.34 billion fine to settle anti-bribery charges in both the United States and Germany.³⁷

However, as one senior official of a major Western defense firm candidly admitted, it will take a number of years to transition the European defense industry to full compliance. This is in part because of the need to change the culture at the firms, and in part due to pre-existing commitments to payments on existing defense projects. Moreover, pressures from potential buyers seeking payments make it difficult for firms to simply say no.

Foreign Payments as a Continued Factor in Defense Markets. Despite these largely salutary developments, there continues to be evidence that illicit payments remain a significant factor in global markets, including defense markets, and there continue to be allegations that leading European firms, including defense firms, have engaged in these practices in global defense markets (including countries of Central Europe). While it is hard to find data on defense markets, some existing data is relevant and probative. As reported in a DoD report, “[b]etween May 1994 and April 1999, bribes allegedly were used to influence the outcomes of 294 international contract competitions. The contracts totaled \$145 billion.”³⁸ Significantly, as the report states, “half of the alleged bribes involved military procurement...”³⁹ The report goes on to note that bribery is pervasive because it is effective. In the competitions noted above, “alleged bribe offers won 90 percent of the contracts sought” and “U.S. companies are known to have competed for and lost 75 contracts worth \$23 billion for which foreign competitors allegedly offered bribes.”⁴⁰ The last available U.S. report on bribery (2004) reflects continued, but somewhat reduced, incidences of bribery involving defense contracts.⁴¹

Interestingly, it is difficult to find any more recent data of this nature on corruption in defense markets. While the U.S. government apparently continues to collect data on specific instances of bribery, it has not apparently released defense-specific data publicly in recent

³⁵ Defence Manufacturers Association and Society of British Aerospace Companies announcement on July 14, 2006. Available at: <http://www.The-dma.org.uk> and <http://www.sbac.co.uk>.

³⁶ *Common Industry Standards for European Aerospace and Defence*, Aerospace and Defence Industries Association of Europe (April 26, 2007). Available at: <http://www.asd-europe.org/Objects/2/Files/WEB%20Common%20Industry%20Standards.pdf>.

³⁷ “Siemens settles bribery cases,” *International Herald Tribune* (Dec. 15, 2008). Available at: <http://www.iht.com/articles/2008/12/15/business/15siemens.php>.

³⁸ Industrial Capabilities Report 2000, p. 42.

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Addressing the Challenges of International Bribery and Fair Competition 2004: The Sixth Annual Report Under Section 6 of the International Anti-Bribery and Fair Competition Act of 1998*, p. 52, U.S. Department of Commerce International Trade Administration (“Based on information available from a variety of sources, we estimate that between May 1, 2003, and April 30, 2004, the competition for 47 contracts worth \$18 billion may have been affected by bribery by foreign firms or foreign officials. Although this represents an increase over last year’s report of 40 contracts, the value of the contracts dropped, from \$23 billion to \$18 billion. Firms alleged to have offered bribes won approximately 90 percent of the contracts in the deals for which we have information on the outcome; U.S. firms are known to have lost at least eight of the contracts, worth \$3 billion. The numbers for each of the last two years represent a sharp drop from the previous five years, which averaged very close to 60 contracts each year.”)

years. However, as noted in individual country reports in Volume II of this study, there are continued reported allegations of bribery in these markets and prosecutions. For example, in 2001, DoD, along with Lockheed and Boeing, formally withdrew from a competition to sell fighter aircraft to the Czech Republic. According to press reports, a letter written by Lt. Gen. Tome H. Walters Jr., then head of overseas sales for the Pentagon, to the Czech foreign minister stated that there was a “lack of transparency” in the negotiations.⁴² The letter also cited a conclusion by the U.S. government that competition for the contract was not aboveboard. The contract was subsequently awarded to BAE and its Swedish partner Saab amidst allegations of bribery. This followed similar issues in efforts to sell U.S. fighter jets to the Hungarian government.

Moreover, more recent TI reports confirm the continued role of bribery generally in global markets, including defense markets. TI’s Bribe Payer Index shows defense as one of the three top sectors where bribery is prevalent.⁴³ A Control Risks 2006 Survey also showed that roughly one third of international defense firms believed they had lost out on a contract in the last year because of corruption by a competitor.⁴⁴ More generally, as TI recently found, “[o]verseas bribery by companies from the world’s export giants is still common, despite the existence of international anti-bribery laws criminalizing this practice... Companies from the wealthiest countries generally rank in the top half of the Index, but still routinely pay bribes, particularly in developing economies.”⁴⁵ David Nussbaum, Chief Executive of TI, recently noted that “[i]t is hypocritical that OECD-based companies continue to bribe across the globe, while their governments pay lip-service to enforcing the law. TI’s Bribe Payers Index indicates that they are not doing enough to clamp down on overseas bribery.... The enforcement record on international anti-bribery laws makes for short and disheartening reading.”

The Lack of Demand Side Efforts to Curb Foreign Payments. The continued propensity for bribery in defense markets and commercial markets more generally reflects the reality that there have been insufficient efforts on the demand side of the bribery equation to meaningfully address this illicit practice. The OECD Anti-Bribery Convention is the leading “supply side” weapon, focused on curbing the payment of bribes in international business transactions by firms in exporting countries. However, it also requires actions on the demand side of the equation to address the incentives to corruption in defense procurement markets (on the buy side). The existence of third-country buyers willing to pay bribes means that Western suppliers will continue to face incentives to make such payments.

9. Export Controls

For each country examined, we have evaluated two elements of export controls that relate to market access. First, we have cursorily examined the export control systems of the countries whose markets are being reviewed to assess, at a top level, to ascertain two matters: 1)

⁴² Nelson D. Schwartz, Lowell Bergman, “Washington attacking corporate corruption elsewhere in the world: Justice Dept. probes British firm’s suspect payments to Saudis,” *The New York Times* (Dec. 2, 2007). Available at: <http://www.sfgate.com/cgi-bin/article/article?f=/c/a/2007/12/02/MNM9TIBA7.DTL>.

⁴³ *Addressing corruption and building integrity in defence establishments*, Transparency International UK (Working Paper 2007), p.2. http://www.defenceagainstdcorruption.org/index.php?option=com_docman&task=doc_download&gid=74.

⁴⁴ *Ibid.*

⁴⁵ Transparency International Bribe Payer’s Index 2006. Available at: http://www.transparency.org/news_room/latest_news/press_releases/2006/en_2006_10_04_bpi_2006.

the effectiveness of their own export control system (i.e., do they have strong systems that enable them to protect from diversion technology and products entering their market and to control exports to third countries); and 2) the degree to which their system is administratively burdensome and cumbersome. Second, we have examined the conduct, attitudes and response of the governments studied and their industries with respect to restrictions of U.S. International Traffic in Arms Regulations (ITAR)—i.e., the extent to which the governments and firms view ITAR as a serious impediment to cooperation and, on that basis, are taking affirmative steps to avoid ITAR controlled articles and technology.

*Effectiveness of European Controls*⁴⁶

With one exception, the countries covered in this study are members of all the major export control regimes that have been established to address concerns raised by the proliferation of weapons of mass destruction (WMD). These multilateral regimes include 1) the Nuclear Suppliers Group, which controls the transfer of nuclear-related materials and technologies; 2) the Australia Group, which controls exports of chemicals and biological materials with potential for use in WMD and related equipment; 3) the Missile Technology Control Regime (MTCR), which controls exports of missile-related items; and 4) the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies. The members of the Wassenaar Arrangement control export of munitions and dual-use items, and also exchange information about weapon transfers in an effort to detect and prevent arms buildups that could destabilize geographic regions. The only country not a member of all the regimes is Romania, which belongs to all but the MTCR.

The United States has long been considered to have a robust system of export controls; the complaint is not that it is insufficiently restrictive. If anything, the complaint is that the United States over-controls technology and products. Other nations are particularly sensitive to U.S. extraterritorial controls that require countries to obtain U.S. approval before foreign products that contain ITAR-controlled parts can be sold to third parties. Unlike most European countries, the United States also regulates the export of intangibles and “deemed” exports (i.e., the release in the United States or abroad of defense technology to a foreign national).

European national export control regimes are becoming more robust in nature over time. A number of the countries studied—Sweden, Germany and Italy among them—have relatively stringent export policies. There remain, however, significant differences in terms of rules, policy and enforcement. These include the regulation of exports of technology or technical data as distinct from products, the coverage of “deemed exports” (release of technology in country to foreign nationals) and the treatment of exports to facilities with EU nationals from numerous countries.

As discussed in Chapter 5, the EU also has established new export control standards for conventional arms exports outside the EU. On December 8, 2008, the Council of EU Foreign Affairs Ministers approved a “Common Position” *making the 1998 EU Code of Conduct on Arms Exports legally binding*, effective immediately upon its adoption.

⁴⁶ As fully explained in Appendix I, we have not scored European countries or the United States with respect to the effectiveness of their export control systems because we lacked the time and resources to conduct a total review of this factor. The discussion herein is based on interviews and a top level review.

The United States has held consultations with virtually all the countries studied on export control issues in recent years and there is some evidence that these countries have all enhanced their practices—especially with respect to third-country exports. The UK also has added rules to cover the export of technology as well as products. The UK has agreed to make numerous changes to enhance its export control regime in connection with the U.S.-UK treaty discussed elsewhere in this study. Indeed, a central element of the Declaration of Principle process has been to encourage participating European nations to level up these practices in exchange for closer defense industrial cooperation. While U.S. concerns over European export controls have been one factor limiting our willingness to share certain technology with close allies, these concerns are somewhat more tempered than they have been in the past—although they vary from one country to another.

Administrative Burden of Export Controls

Generally, as reflected in the individual country discussions, European export licensing is not that burdensome except in Italy, where the export licensing process is viewed as cumbersome, bureaucratic and very time-consuming.

ITAR-Related Behaviors

Multiple studies have highlighted the serious issues posed by the current U.S. system of defense trade controls—the ITAR. This study is not intended to examine whether and to what degree ITAR rules and policies are reasonable and sound; the specifics of these ITAR issues are beyond the scope of this study. However, the impact of ITAR on the Transatlantic defense market relationship is material to this study and, hence, we have focused on it.

The results of our many interviews are consistent: ITAR is viewed as a significant barrier to Transatlantic defense market development by governments (including some U.S. government officials, current and former) and market participants.

Western European countries and firms—including the UK government and firms—clearly stated that they do and will in the future avoid ITAR controlled articles and technologies where they can in defense acquisition because ITAR controls limit operational sovereignty, increase the risks of schedule delays, and restricts the freedom to re-export. Market participants, U.S. and foreign, consistently reported that ITAR slows the speed of obtaining licenses needed for sales and collaboration, unduly limits the release of U.S. technology, creates business uncertainty, and generally makes Transatlantic defense industrial cooperation difficult.

Specifically, the obstacles posed by ITAR are as follows:

- **Limits on Operational Sovereignty.** Reliance on ITAR-controlled systems in their operations potentially limits their operational sovereignty; in times of crisis, these nations want the flexibility and autonomy to modify and adjust their systems to changing missions in real time and repair them without obtaining prior approval

from the United States or relying on U.S. suppliers. The use of “black boxes” and other restrictive solutions limits the ability of these countries to operate freely with their military systems—limitations these countries are reluctant to accept. The UK, one of our closest allies, as well as France and Italy, expressed strong concerns about this issue.⁴⁷

- **Program Delays.** Relying on ITAR-controlled systems and subsystems also can create risks of schedule delays on their programs—which also has significant cost implications and contractual implications for contractors. In most countries we visited, examples were offered.
- **Re-Export Restrictions.** ITAR re-export restrictions can limit these countries’ own flexibility to export systems with U.S. components to third parties. This is a crucial issue for a country like Sweden, for example, which relies on export sales and the economies of scale to keep its defense industry viable.
- **Multinational Facilities.** Finally, ITAR restrictions that prohibit unlicensed foreign nationals from having access to ITAR-controlled technology cause headaches for defense firms in the countries we have studied because those firms typically employ foreign nationals from numerous European, and other, countries. European governments and firms have long raised this issue with the United States.

This trend was first evident in the space sector, where restrictive ITAR policies were adopted after the China satellite controversy in the mid-1990s. Clear evidence has emerged in a recent study that Europe has developed ITAR-free solutions (including complete ITAR-free satellite systems), and that the U.S. space suppliers’ market shares in global space markets are eroding in part as a consequence of these actions.⁴⁸ Additionally, because foreign space faring nations have been forced to develop their own space capabilities beyond the scope of U.S. export controls, the U.S.’ unwillingness to share space technology with foreign space programs has had the unintended consequence of creating real proliferation risks beyond the control of U.S. licensing authorities.

⁴⁷ These nations assert the need to be able to make deliberate and independent decisions on a capability—especially in an operational context. In their view, their armed forces must be able operate independently and without continually seeking permission—or worse, struggling to get permission—for the latest software updates, threat information, etc. These points are discussed in detail in the chapters for the UK, France and Italy in this report.

⁴⁸ For a full discussion of these findings, see Briefing of the Working Group on the Health of the U.S. Space Industrial Base and the Impact of Export Controls,” Center for Strategic & International Studies (February 2008). Available at: http://www.csis.org/media/csis/pubs/021908_csis_spaceindustryitar_final.pdf.

Tangible Evidence of ITAR Design Arounds

Years of European talk of “designing around” or “designing out” ITAR-controlled articles and technologies have now begun to be translated into action. Based on the many interviews we conducted for this study, there is clear evidence that European governments, including our closest allies, and their firms are designing out ITAR components and subsystems where they can in defense systems and products. While European governments will procure ITAR-controlled systems and components if they need to (i.e., where the capability is otherwise not available), they also will avoid it where they can — especially to maintain export flexibility on European platforms.

- Some governments in Europe are adopting “ITAR-free” as an express policy or informal practice. The new French White Paper explicitly cites the need for non-ITAR-controlled electronics components to avoid limitations on French freedom of action.
- In one case, a key ally has sought to ensure “operational sovereignty” over a capability by requiring that the program be staffed with domestic engineers free of ITAR restrictions.
- European contractors have developed policies to avoid the use of ITAR products and technologies, or have “dual track” production of components—one subject to ITAR and one not. Even firms not trying to design out ITAR components confirm that ITAR restrictions are a factor in choosing suppliers—a non-ITAR component will be chosen to avoid re-export issues, if possible.

European governments and firms may at times face choices between better but ITAR-restricted U.S. capabilities and components and less capable but unrestricted foreign sources of supply. Increasingly, there are more choices available—as consolidating European firms become more robust. Where the differential is not great, European governments and firms are increasingly opting for the non-ITAR choice.

Additionally, some U.S. firms have themselves sought to maintain access to these markets by developing an ITAR-free product line (e.g., in the aerospace arena) to remain competitive.

The Adverse Impact on U.S. Subsystem Suppliers

This striking ITAR-free evolution operates particularly to the detriment of U.S. component and subsystem suppliers, whose products now are precluded in numerous cases from competitions within Europe. Over the longer term, the restrictions under ITAR and the resulting European ITAR-free movement also may serve to create European solutions outside of the scope of U.S. export controls that raise concomitant proliferation risks for the United States.

While the “ITAR-free” trend is apparent in all of the Western European countries studied, it varies in intensity from one country to another. Table 10 sets forth the country-specific scores. It is notable that even the UK, our closest ally, has now taken up this movement.

Table 10 Total Scores for Export Controls⁴⁹

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Export Controls	1.00	0.60	0.60	0.60	1.00	1.00	0.90	0.80	0.50
Effectiveness of Export Control Process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Administrative Burden of Process	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ITAR Related Conduct and Policy	1.00	0.60	0.60	0.60	1.00	1.00	0.90	0.80	0.50

- **Poland and Romania.** In contrast to Western European countries studied, we found no real complaints in Poland or Romania about ITAR. As these countries at present do not design, build or export many defense products with U.S. components or subsystems or do so in a very limited way, re-export flexibility is not a pressing issue for them. Also, they have little cooperative engagement with U.S. firms in advanced technology areas.
- **Sweden.** Swedish officials and firms raise all of the ITAR-related concerns heard in the other Western European countries. However, with significant U.S. content in Swedish systems, neither the government nor Swedish companies follow an “ITAR-free” policy. Swedish companies did, however, confirm that ITAR restrictions are a factor in choosing suppliers, and if given a choice in a competitive environment, the non-ITAR component will be chosen to avoid re-export issues. Also, Swedish officials do believe that the recent U.S. reluctance to accommodate their request on some major technology transfer issues reflects economic and not security reasons, which they view as departures from prior times, when, in their view, strategic considerations were dominant in the relationship.
- **United Kingdom.** Even the UK has been increasingly frustrated with the lack of U.S. willingness to share sensitive technology—which came to a head in the F-35 Joint Strike Fighter program—as well as with the usual procedural complaints associated with ITAR. The failure of the U.S. Senate to ratify a recent U.S.-UK treaty designed to address these issues has reinforced UK concerns. UK concerns, often expressed in terms of “operational sovereignty,” have grown and could affect the UK-U.S. relationship in the future if not addressed. While the UK has not adopted a “design around” policy, it is taking some steps to ensure operational sovereignty on major platforms and reduce ITAR exposure.

⁴⁹ As noted above and fully explained in Appendix I, we have not scored European countries or the United States with respect to the effectiveness of their export control systems because we lacked the time and resources to conduct a total review of this factor. The discussion herein is based on interviews and a top level review.

- **Italy, France and Germany.** Government and business representatives consistently expressed the desire to find ways around ITAR by building or purchasing ITAR-free equivalents of various systems and components. While large firms in Italy and France underscored that they understand how to work within ITAR and are fully supportive of the U.S. regime, they also report this complicates technical solutions and schedules in dealing with U.S. products. In France, as noted above, this is now formalized in French policy. In Germany, one executive called it a “trend all over Germany to do without ITAR parts and components.”

Finally, ITAR has implications for European market access to the U.S. defense market. As discussed in detail in Section II, Chapter 14, the consequence of U.S. export control rules has been to build walls between the United States and other countries, making collaboration with even our closest allies very difficult in key defense and related technology areas and eroding trust with our traditional partners. The problem is particularly pronounced for foreign firms seeking to access the U.S. market, which requires licenses to bring foreign technology into the U.S. market because of the need for exchanges between foreign and U.S. engineers as foreign technologies are tailored to U.S. requirements. *Thus, from this perspective, the United States was afforded the lowest score on ITAR-related issues.*

In sum, fairly or not, ITAR is a major detrimental factor in the Transatlantic defense market that limits the opportunity for cross-border trade. Of course, it should be recognized that ITAR restrictions serve a very legitimate purpose—the protection of U.S. sensitive technologies and products that afford our military its qualitative superiority. Hence, it probably is unfair to view ITAR as the root of “all problems,” as one U.S. official put it. Indeed, in some areas, there is a cogent basis for the U.S. view that European controls have not been sufficiently robust. That said, however, it also is plain that U.S. ITAR rules are having an adverse impact on our armaments and defense industrial relationship with some of our closest allies.

ITAR and Protectionism

Finally, there is a perception that both the U.S. application of the ITAR and the European response to it has protectionist elements on both sides of the Atlantic.

In some European countries, both governments and companies viewed some ITAR policies adopted by the United States as protectionist in nature as distinct from security related. For example, some executives noted that U.S.-German joint ventures fare better than German firms seeking ITAR authorizations to compete against U.S. firms. Similarly, in Sweden, government officials complained that the apparent U.S. decision not to allow the use of advanced U.S. radar on the Swedish Grippen aircraft reflected protectionist rather than “strategic” policy considerations. Further, foreign observers question U.S. policies of maintaining controls on technologies or products long after they are more widely available in the world or are not leading-edge. They wonder whether such restrictions are in place for a purpose other than security.

On the other hand, a number of observers believe that at least part of the European response to ITAR, including the “ITAR-free” movement, may also serve less legitimate aims—namely to discriminate against U.S. suppliers to benefit European companies and develop the European defense industry and technology base in an increasingly “Fortress

Europe.” Whether or not this truly is the motivation, it is clear that the ITAR-free movement very well could have this result.

10. Intellectual Property Protection

In general, the protection of IP rights is not a major discriminator in defense markets. The United States and the European countries examined all are adherents to key international IP disciplines; these include the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (requiring adequate levels of protection and enforcement of IP rights, including trade secrets, as well as national and most-favored nation treatment), the Paris Convention for the Protection of Industrial Property (patents, trademarks and industrial designs), the Patent Cooperation Treaty (patents), the Berne Convention (copyrights), the Protocol Relating to the Madrid Agreement (trademarks), and the World Intellectual Property Organization. All of the European countries are also adherents to the EU trademark system, including numerous EC Directives that have been implemented by EU Member States.

All of the countries examined also have relatively strong legislation aimed at curbing IP rights infringement. However, enforcement of these strong rules is a national responsibility and the track record varies from country to country. While enforcement is generally good in the countries studied, several countries—notably Italy, Romania and Poland—have less robust a record on enforcement.

In general, patents, copyrights and trademarks play less of a significant role in defense markets. While most defense firms hold significant proprietary technology, it is not usually subject to patents and the like. The key intellectual issue for most defense firms in accessing foreign markets is the degree to which they can protect their existing proprietary technology (i.e., background information already developed by firms using their own resources or on other contracts) and not be forced to share it with the government customer. In this regard, the countries evaluated all have procedures in place that allow firms to protect their existing proprietary rights in the context of defense procurement.

U.S. and European governments generally do desire, however, to seek and obtain IP rights as a return on their investment in defense programs—especially where development dollars are being spent. The reverse is also true—the defense firm’s home government will assert its IP rights to protect investments by home country tax payers *vis-à-vis* other countries’ government purchasers that seek access to such IP.

Table 11 below provides the relative score of each country on this issue. The treatment of IP rights in the defense markets studied does not appear to be discriminatory *vis-à-vis* foreign firms.

Table 11 Intellectual Property Protection—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Intellectual Property Rights	1.00	0.90	0.90	0.80	0.50	0.50	0.90	0.90	0.70

- **France, Germany Sweden and the United Kingdom** effectively protect IP rights under their regulation regimes, including background IP.
- **Italy's** protection of IP rights lags behind the other Western European countries studied. The Italian government has shown a strong desire to retain and develop Italian-origin IP. Foreign firms must seek protection for their IP rights on a case-by-case basis in defense contracts.
- **Poland's** IP regulatory regime is gradually becoming more effectively implemented and better enforced. While piracy remains an endemic problem, participants in the defense market that we interviewed did not express any concerns about protection of their IP.
- **Romania** is on the Department of State's watch list for not adequately protecting IP rights. Piracy and cyber-crime still pose significant problems. However, market participants interviewed did not complain about inadequate protection or lax enforcement in the defense market.
- The **United States** generally provides strong protection for IP rights. However, under U.S. Government procurement regulations, the U.S. Government will generally seek unrestricted rights in technology it funds (except in certain limited situations such as small business programs). Foreign suppliers therefore must be careful to protect background IP that is proprietary to the supplier or foreign government. The U.S. government has among the most expansive legal rights to obtain such broad IP rights of the countries studied. In the United States, the Defense Federal Acquisition Regulation Supplement also provides an additional regulatory regime that, depending on the source of funding for product design and development, can protect a defense firm's proprietary rights or the U.S. Government's rights to use relevant designs and technologies as it sees fit. This regime could be applied to European firms or U.S. firms in a given situation, but we found no evidence it was being applied in a discriminatory way against foreign firms.

11. Technical Standards

Technical regulations and standards vary from country to country. The cost and difficulty of having to comply with numerous different standards can effectively shut foreign suppliers and exporters out of domestic markets.

The WTO has sought to address this problem in the Agreement on Technical Barriers to Trade, which prohibits discrimination and tries to ensure that regulations, standards, testing and certification procedures do not result in unnecessary obstacles or barriers. The WTO, to which all of the countries studied belong, serves as a clearinghouse to monitor and ensure that member countries have a domestic contact office to keep other members informed about new or modified regulations and standards. Nevertheless, countries have the right to adopt the regulatory standards they require to protect their national security. Thus, the countries studied have the discretion to, and some have, put in place their own specific technical standards for defense products that go beyond common standards established by NATO and the EU (see below). If such standards are set arbitrarily, they could potentially be used as non-tariff barriers to protect domestic producers.

In the course of this study, we did not learn of specific problems foreign defense firms have faced with respect to technical standards in trying to do business in the relevant defense markets in the countries studied (although, as noted below, foreign defense firms entering the U.S. market reported difficulties with the generally complex and different U.S. standards). Despite each country's right to set its own standards to protect its national security, market participants did not report that such standards were applied discriminatorily against foreign firms.

In general, most European governments follow NATO Standardization Agreements today. As discussed in Chapter 5, however, the EDA is developing a new set of European standards. While these will in the first instance likely parallel and borrow from NATO standards, there are numerous areas where no NATO standards exist where EDA will need to fill the gap. As it does so, there is a real risk that European standards can emerge that could potentially become market access barriers to U.S. firms in the future.

Indeed, the history of market opening initiatives is that as more traditional barriers fall, such as exclusionary tariffs and failure to allow competition, more subtle barriers like standards requirements often replace them. Thus, the United States should closely monitor emerging European technical standards in the defense arena.

Table 12 provides the relative scores of each country evaluated on this issue, based on assessments provided by the U.S. Department of Commerce and U.S. Trade Representative as well as our own interviews of participants in each relevant defense market.

Table 12 Technical Standards—Scores

Criterion	Internal Weight	France Unweighted	Germany Unweighted	Italy Unweighted	Poland Unweighted	Romania Unweighted	Sweden Unweighted	UK Unweighted	U.S. Unweighted
Technical Standards	1.00	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80

- **Germany, United Kingdom, Sweden, France, Italy.** There is no significant basis on which to distinguish standards requirements imposed by the countries studied. Germany may have more bureaucratic layers to negotiate, but we found no evidence that any of the countries used standards requirements in a discriminatory manner. Although Sweden is not yet a NATO member, its heavy reliance on U.S.-origin technology and participation in NATO and EU missions has ensured interoperability with other country requirements.
- **Romania, Poland.** These two countries have adopted U.S. and EU standards respectively, and therefore have put apparently fair and non-discriminatory regulatory regimes in place. However, these countries do not apply these standards effectively and consistently. Still, we found no evidence that standards were being applied in a discriminatory manner against foreign defense firms.
- **United States.** To European suppliers, the detailed U.S. Defense Standards (often called MIL-SPEC or MIL-STD) requirements can be perceived as a market access barrier when successfully operated foreign products must be re-tested and re-certified to meet U.S. requirements. Participants in the U.S. defense market that we

interviewed, however, stated that these U.S. requirements were not applied discriminatorily against foreign firms.

* * *

In sum, as this analysis of market access metrics shows, some progress has been made toward achieving open and competitive markets on both sides of the Atlantic. However, several more subtle, but significant, market access barriers exist and there are material risks of fortress-like conduct in the future as these markets evolve. In particular, as defense markets become more open and competitive, there is increased risk that these less subtle barriers (such as technical standards) become more significant and are used as a basis to discriminate against non-national sources of supply.

Chapter 4

Defense Market Outcomes: Measuring Traffic on the “Two-Way Street”

Thus far, this study has examined the nature and extent of impediments to market access in order to develop an overall sense of the openness of national defense markets in Europe and the United States. As discussed at the outset, a second, independent way to assess market openness is to focus on real-world market “outcomes”—trends in defense trade and investment flows, the footprints of foreign defense firms in the different markets, and the degree of Transatlantic defense cooperation.

This chapter therefore examines such “outcomes” with respect to the current balances and trend lines of defense trade, investment and cooperation between the United States and Europe in order to get a separate picture of the degree of autarkic behavior on both sides of the Atlantic.

In a certain sense, this is a new analysis of the fabled “two-way street” in Transatlantic defense trade. Europeans for many years have complained that the street really is “one-way” in nature, with Europeans purchasing large quantities of U.S. systems and subsystems while the United States acquires only trivial numbers of European systems. During interviews with European industrial and government representatives, there was a frequent mention of the “imbalance” in defense trade.

Five Key “Two-Way Street” Metrics

The metrics analysis below addresses this core issue and serves as a check on the validity of the market access analysis set forth above. Specifically, we have evaluated:

- **Transatlantic Defense Trade Flows;**
- **Value Added: U.S. Presence on European Platforms and European Presence in U.S. Platforms;**
- **Foreign Direct Investment in Europe and in the United States;**
- **Transatlantic Defense Footprints; and**
- **Strategies of Defense Firms to Cope With Challenging Markets.**

Transatlantic Defense Trade Flow

Our analysis of Transatlantic trade flows examines several components:

- The magnitude and balance of trade (U.S.-to-Europe and vice versa);
- Relevant shares of defense markets (i.e., the U.S. share of the European market and vice versa); and

- The values and trends for Foreign Military Sales (FMS) and Direct Commercial Sales (DCS) with respect to U.S. trade with Europe.
- The first provides a measure of the value and balance of trade between the United States and Europe; the second, an indication of the importance of the markets to each side; and the third, a sense of the main sales channels used by the United States in marketing to Europe.

Transatlantic Defense Trade: Magnitude and Balance

As shown in Figure 35, the United States has been running a large defense trade surplus with the European countries covered by this study. As these countries include the largest U.S. defense trading partners and account for the majority of the Transatlantic defense trade (as will be shown below), these results essentially serve as a rough indicia of the trends for all of Europe.⁵⁰

As Figure 35 reflects, U.S. defense exports to the European countries studied grew sharply from \$1.2 billion in 2002 to more than \$6 billion in 2006—mainly in response to operational requirements for coalition forces in Iraq and Afghanistan; there were a number of sales of aircraft, tactical vehicles, chemical and biological warfare systems, helicopters and logistics support products.⁵¹ U.S. sales to Europe have been declining since 2005 but still are at much higher levels than earlier in the decade—totaling more than \$5 billion in 2007. The drop-off appears to reflect a drawdown in European participation in various operations related to the war against terrorism as well as the completion of necessary acquisitions.

Nonetheless, the total picture over the six-year period covered shows that U.S. defense exports have increased fivefold, representing a major penetration of the European market—albeit under unique circumstances. The data reflects that European countries studied, notwithstanding a long-term desire to buy more European, largely procured U.S. equipment for urgent operational needs.

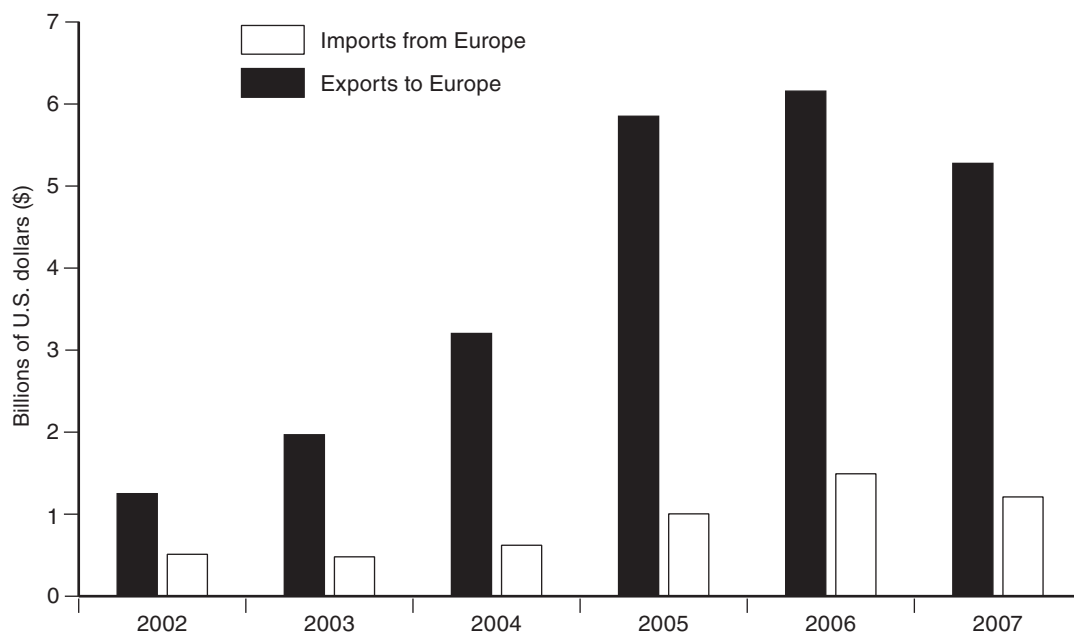
In contrast, European exports to the United States totaled only \$511 million in 2002, and increased to only \$621 million by 2004 (see Figure 42 below).⁵² European sales to the United States then increased significantly in 2005 and 2006—to \$1 billion and \$1.5 billion respec-

⁵⁰ The defense export data on Figure 35 is compiled by the U.S. Defense Security and Cooperation Agency (DSCA). Methodological issues have arisen with respect to a portion of DSCA's data. Specifically, through 2004 DSCA employed modeling to measure U.S. defense exports. Beginning in 2005, however, DSCA began using the U.S. Customs Service Automated Export System (AES) to measure the actual value of goods exported. However, the data for Germany in the years 2004-2007 exhibits considerable anomalies when compared with the Department of State-Directorate of Defense Trade Controls (DDTC) Section 655 Reports to Congress. While the Section 655 Reports tally only defense exports requiring State Department approval, the figures between DSCA and DDTC generally correlate. In 2005, however, DSCA's data showed U.S. defense exports to Germany at \$7.3 billion, while the Section 655 Report showed only \$1.5 billion. Cognizant Department of Defense (DoD) representatives were unable to account for the discrepancy. They believe the DSCA data for Germany, collected during the first year the new methodology was used, to be flawed. We therefore have treated 2005-2007 Germany data as a system error. Figures for Germany between 2004 and 2007 are therefore estimated by averaging the DSCA and Section 655 figures.

⁵¹ An examination of Department of State-DDTC "Section 655 Reports" to Congress on defense exports shows France, Germany and the United Kingdom (UK) all purchasing large amounts of spare parts and components for communications equipment, sensors, electronic warfare systems, chemical and biological warfare systems, aircraft, helicopters, tactical vehicles and training equipment during this period. This indicates efforts to increase operational readiness and support forces deploying out of area.

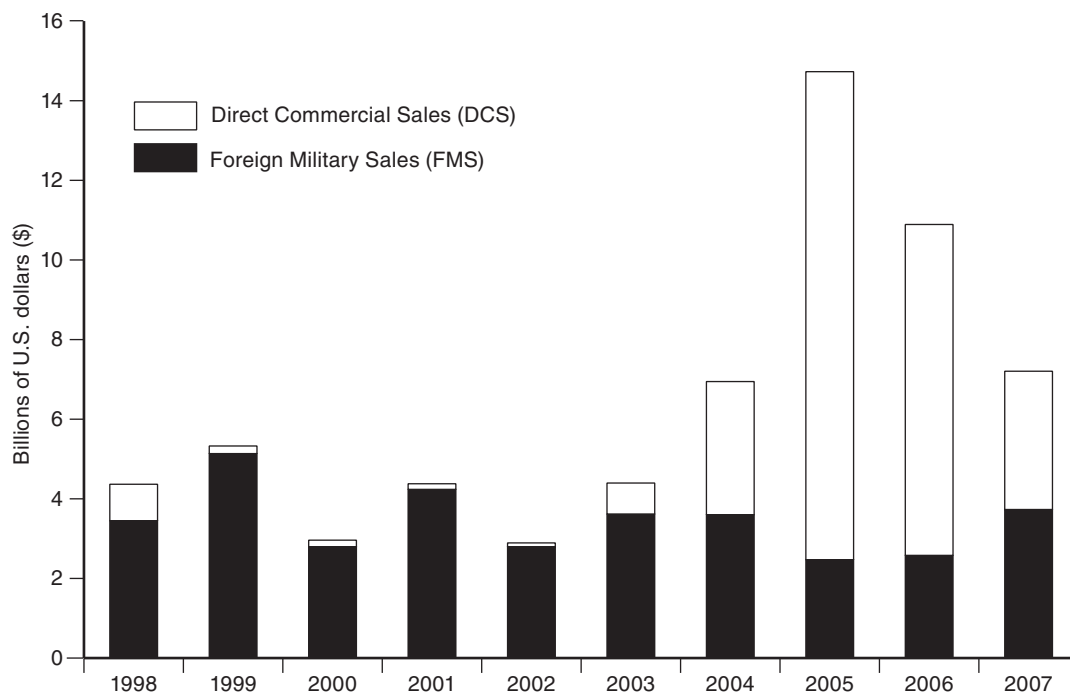
⁵² European exports do not include sales by U.S. subsidiaries of systems and products manufactured in the United States. They only include actual exports from European countries.

Figure 35 U.S. Defense Trade Flow With European Study Countries, 2002-2007

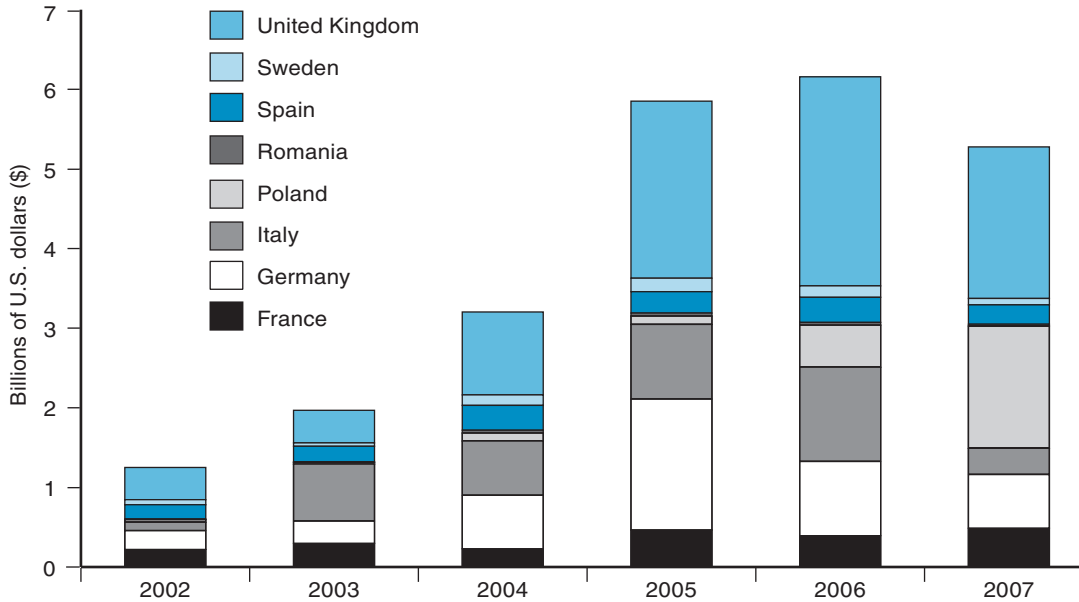


Source: DSCA and European Defense Export Control Agencies.

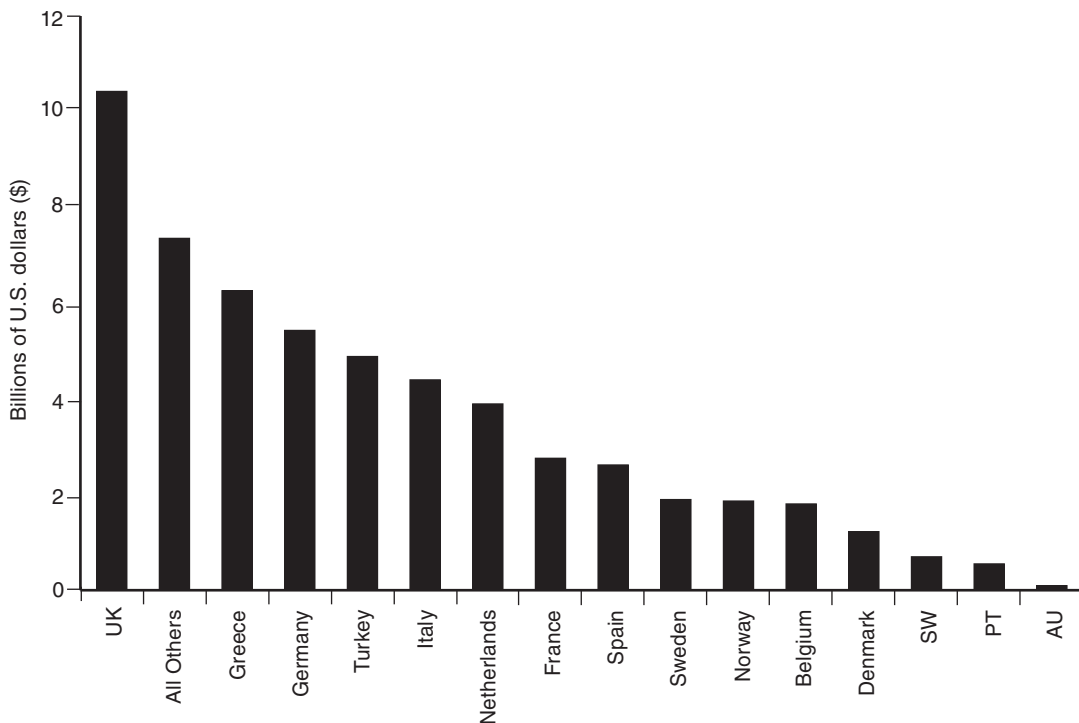
Figure 36 U.S. Defense Exports to Europe—FMS vs. Commercial Sales



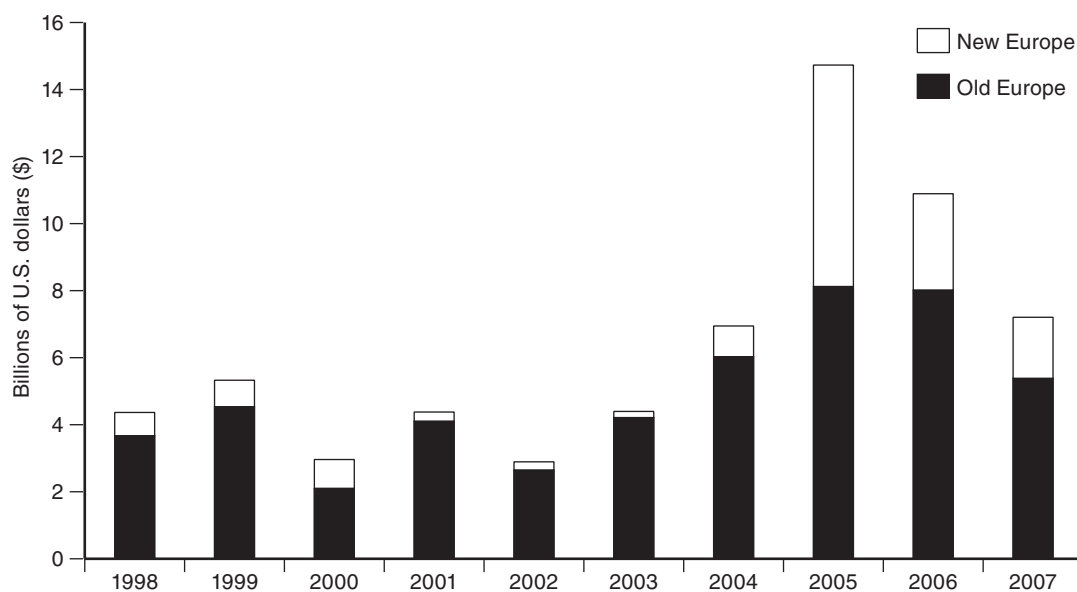
Source: DSCA Factbook 2007.

Figure 37 Defense Exports to Study Countries, 2002-2007

Source: DSCA and European Defense Export Control Agencies.

Figure 38 U.S. Defense Exports: European Customers, 1998-2007

Source: DSCA Factbook.

Figure 39 U.S. Defense Exports: “Old Europe” vs. New Europe

Source: DSCA Factbook.

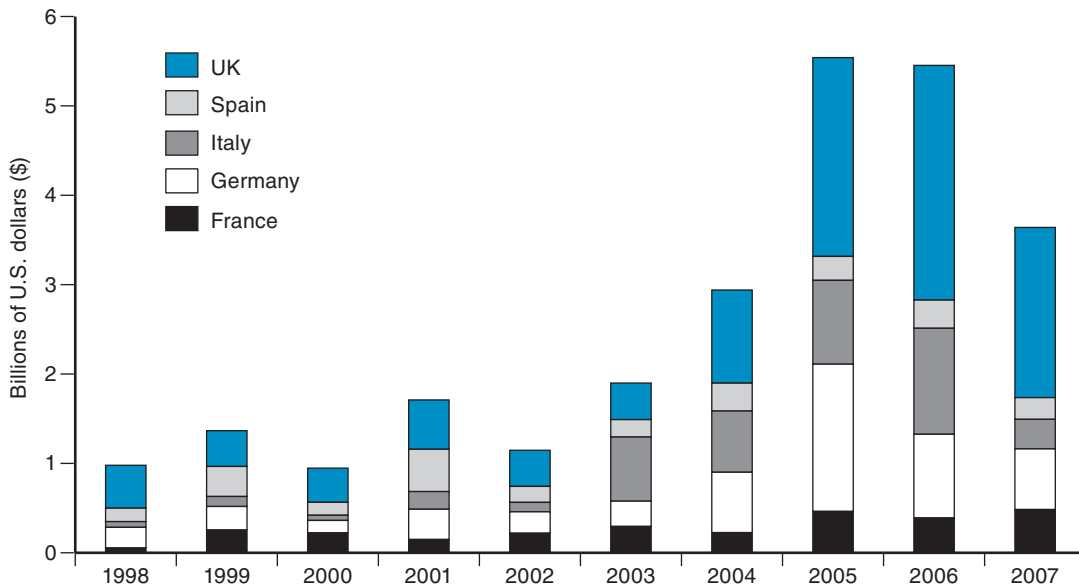
tively—primarily due to U.S. acquisition of European “niche” systems needed for the wars in Iraq and Afghanistan (e.g., mine resistant vehicles, engineering equipment).⁵³ European exports to the United States slipped slightly to \$1.2 billion in 2007.

U.S. Foreign Military Sales remains an important element of U.S. defense exports to Europe. According to the Defense Security and Cooperation Agency (DSCA) Factbook,⁵⁴ FMS deliveries (not agreements) for the years 1998–2007 were \$34.3 billion as compared to \$29.1 billion in Direct Commercial Sales. From 2004–2006, the proportion of DCS to FMS dramatically increased; by 2007, however, there was a rough parity, as shown in Figure 36.

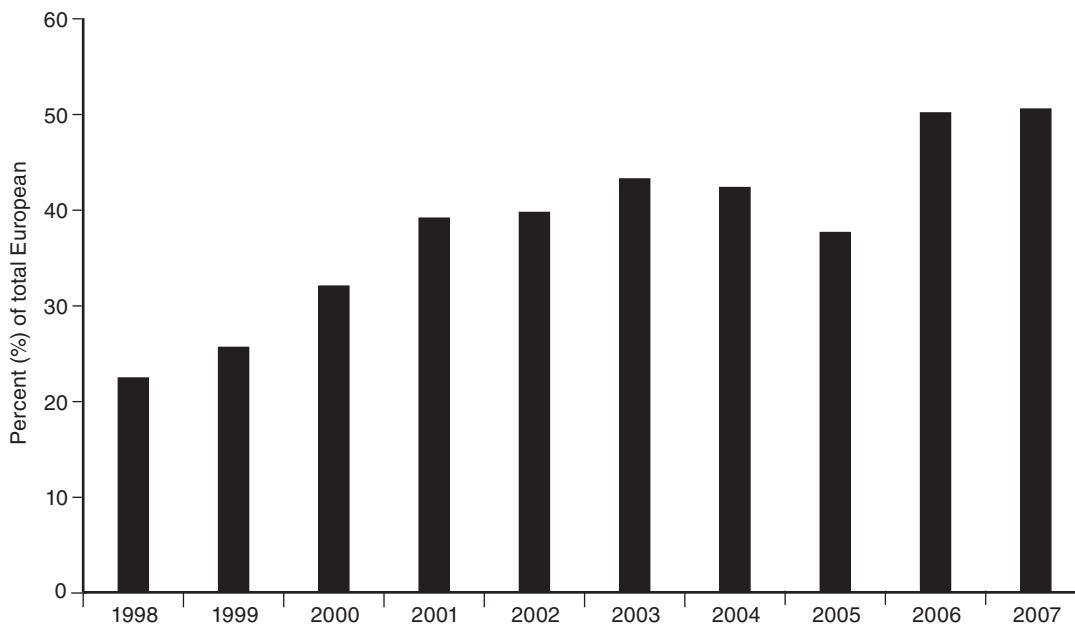
When U.S. sales to each European country are viewed separately, the United Kingdom (UK) was the largest U.S. export customer over an extended period, followed by Greece and Germany. As shown on Figures 37 and 38, the UK purchased more than \$8.6 billion in defense goods during 2002–2007 and roughly \$10.4 billion from 1998–2007. Germany bought more than \$5.4 billion in defense goods from 1998–2007, including \$4.5 billion from 2002–2007. In both Germany and the UK, purchases from the United States after 2003 appear driven by current operational requirements, and not by long-term procurement needs. The large sales to Greece reflects its extensive use of FMS financing. Italy was the fourth largest customer in the 2006–2008 period, followed by France and Poland.

⁵³ We determined this by reviewing both awards in the Documental Solutions database and detailed sale-specific data in reports prepared by European defense export control agencies found on the website of the Stockholm International Peace Research Institute (SIPRI). See Appendix I for more details on these reports.

⁵⁴ DSCA Factbook 2007, op. cit.

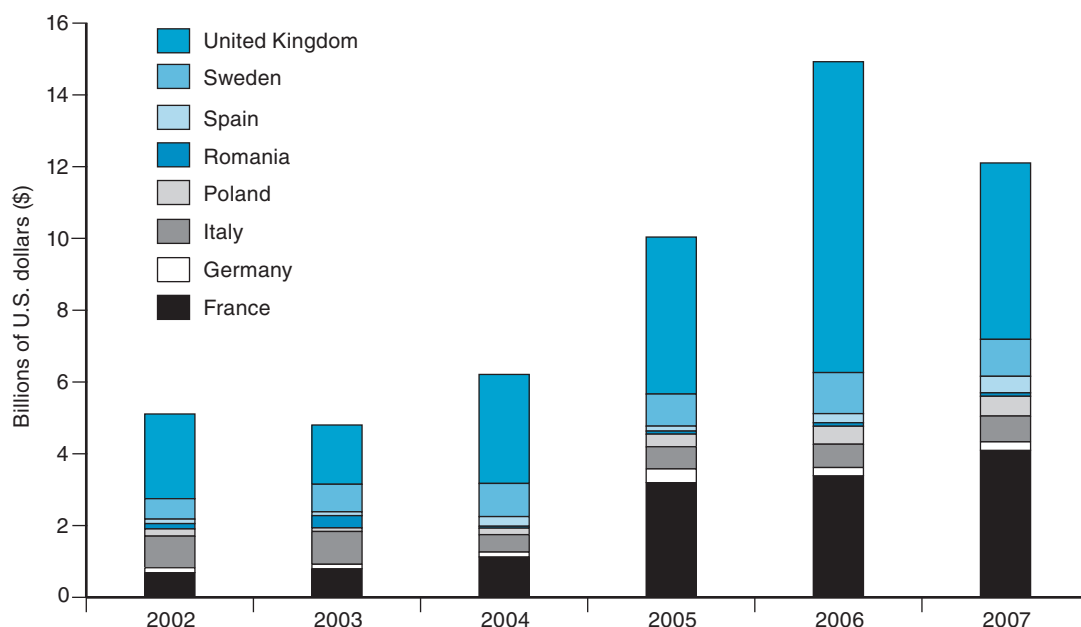
Figure 40 U.S. Defense Exports to “Big Five”

Source: DSCA Factbook.

Figure 41 U.S. Defense Exports, “Old Europe” as Percentage of Total Europe

Source: DSCA Factbook.

Figure 42 U.S. Defense Imports from Study Countries, 2002-2007



Source: DSCA and European Defense Export Control Agencies.

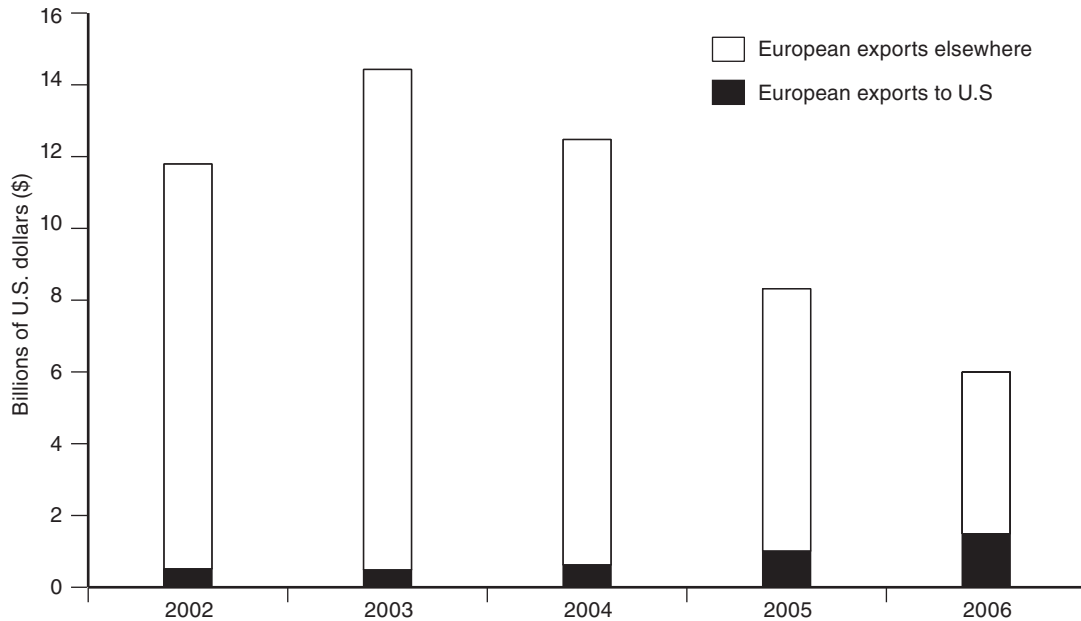
Viewed regionally, the North Atlantic Treaty Organization (NATO) and European Union (EU) “new accession” countries of Central and Eastern Europe (termed “New Europe” in our Figures) have become important new markets for U.S. defense companies (due to their need to re-equip with modern, NATO-compatible equipment and lack of indigenous production capacity). However, as shown on Figure 39, in dollar terms, the countries of “Old Europe” remain the principal customers for U.S. defense exports.

Within “Old Europe,” the so-called “Big Five” (France, Germany, Italy, Spain and the UK) still make up the main U.S. customer base, accounting for more than half of all U.S. defense sales to Europe. During the peak years of 2005-2007, the Big Five accounted for as much as 80 percent of U.S. exports to Europe (see Figures 40 and 41).

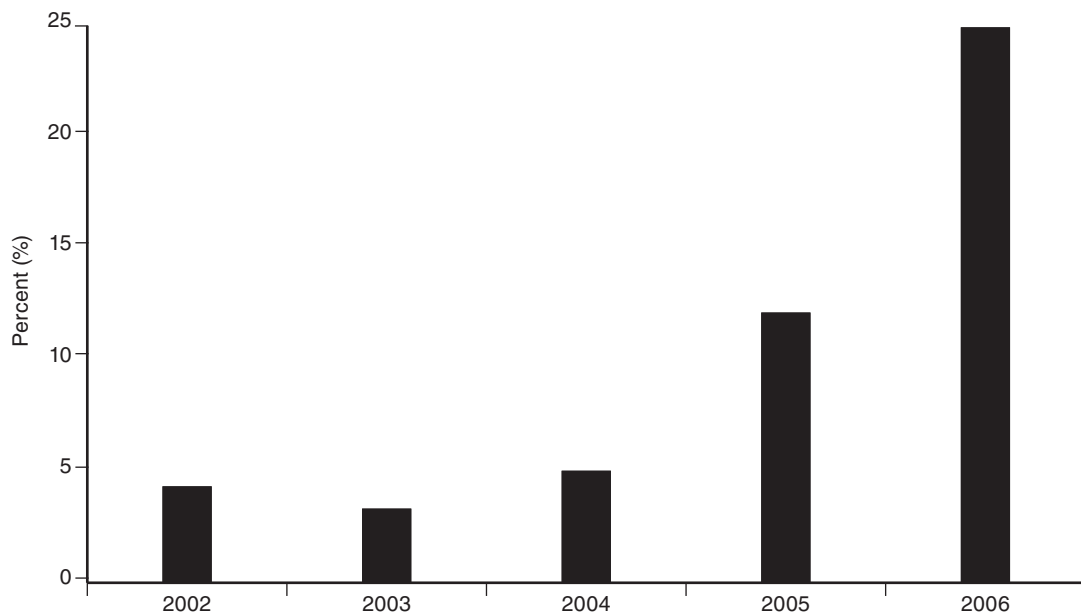
U.S. imports from the European study countries, viewed separately, are shown in Figure 42. Not surprisingly, the UK was the single largest European supplier country, with sales of \$2.5 billion. France was the second largest supplier, with sales of \$1.3 billion (again, only including imports and not sales of U.S.-produced articles by U.S. subsidiaries of French companies). Beyond that, no other country had U.S. export sales of more than \$532 million to the United States, indicative not only of the relatively small size of their industrial bases but also the inability of their products to penetrate the U.S. market.

Importance of the Transatlantic Defense Market

More critical than the volume of the Transatlantic defense trade flow is its importance relative to the total defense export markets in both Europe and the United States. As shown in Figures 43 and 44, European exports to the United States have risen both in absolute

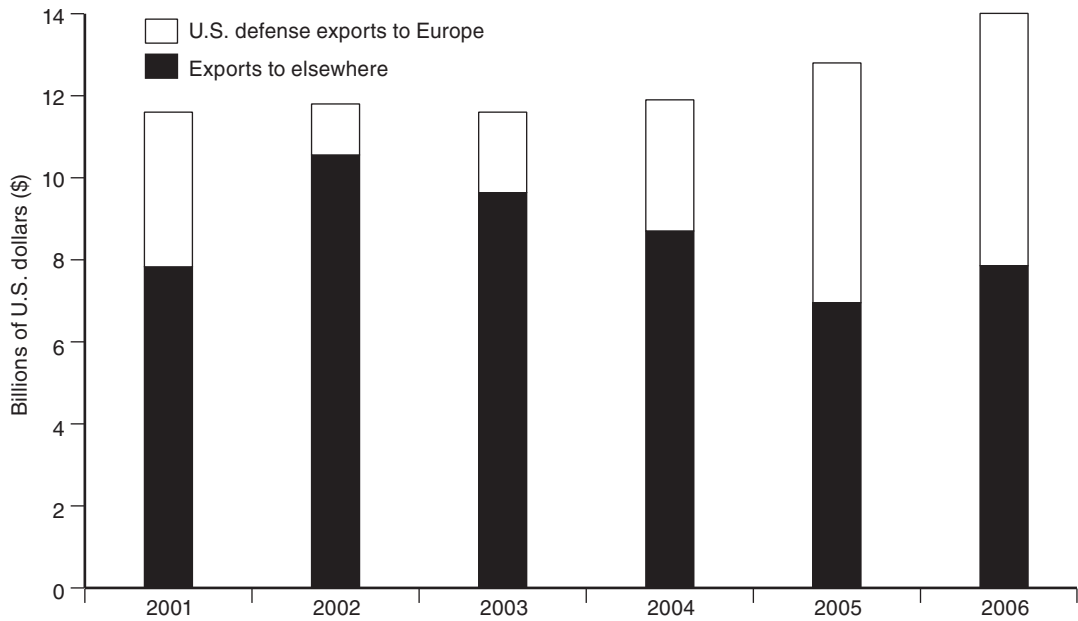
Figure 43 European Defense Exports

Source: IISS Military Balance, 2008.

Figure 44 European Exports to United States as Percent (%) of Total European Defense Exports

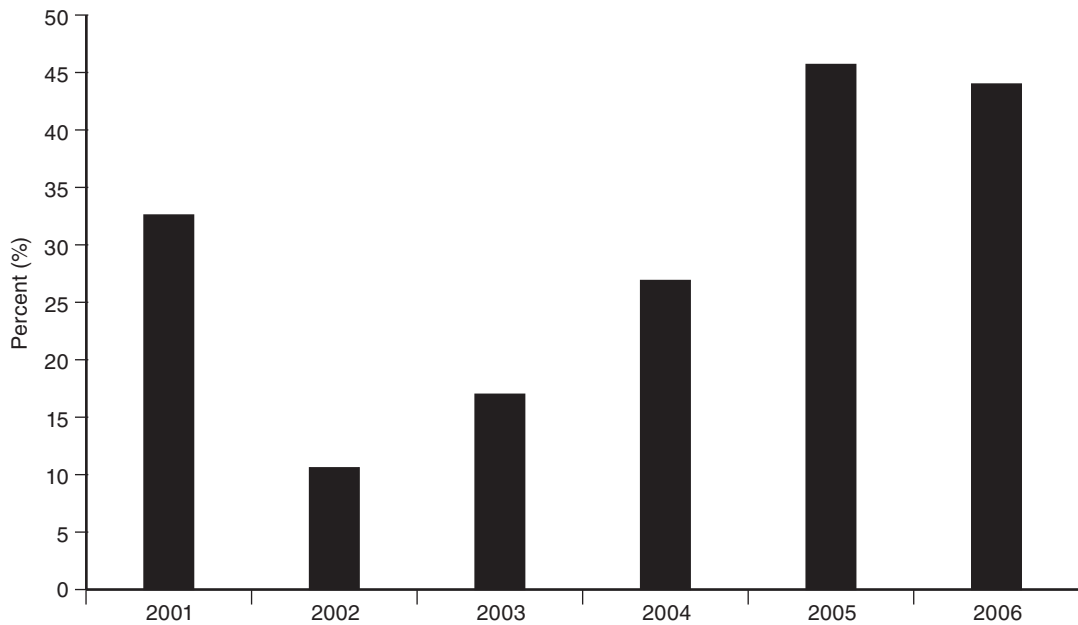
Source: IISS Military Balance, 2008.

Figure 45 U.S. Defense Exports, 2001-2006

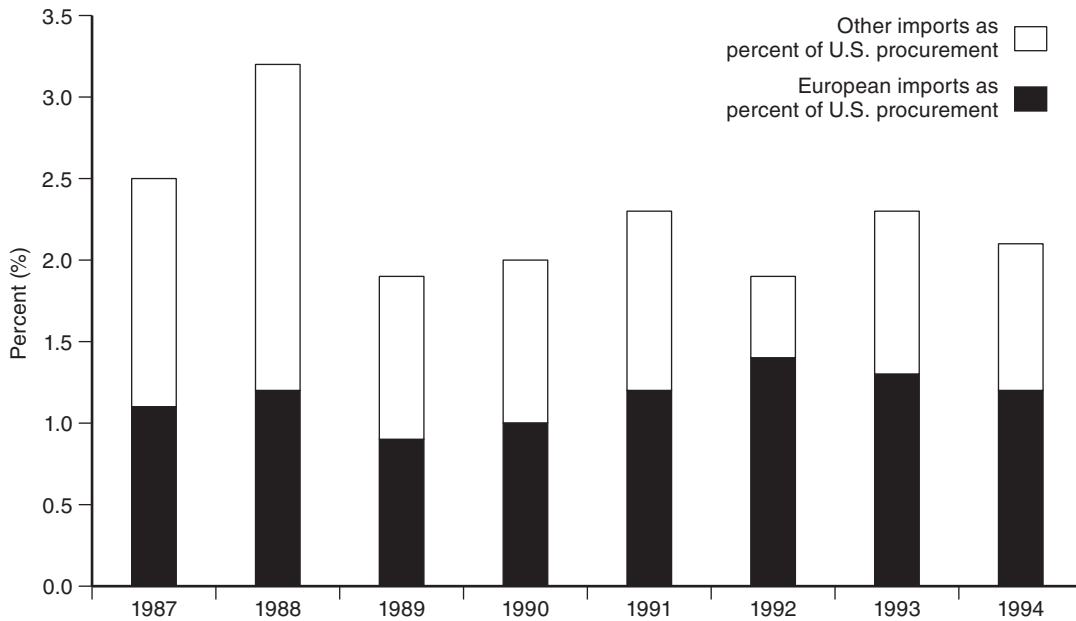


Source: SIPRI Yearbook, 2008.

Figure 46 U.S. Exports to Europe as Percent (%) of Total U.S. Defense Exports



Source: SIPRI Yearbook, 2008.

Figure 47 European Imports as Percent (%) of U.S. Defense Procurement, 1987-1994

Source: IISS Military Balance 1994-1995; DoD Biennial Budget Submission (Green Book) FY 2008.

value and as a proportion of total European defense exports. By 2006, sales to the United States grew to become one fourth of total European defense exports while the total value of all European exports declined from \$14 billion to just under \$6 billion. In other words, as other markets stagnate or decline, the U.S. market has become much more important to the health of the European defense industry.

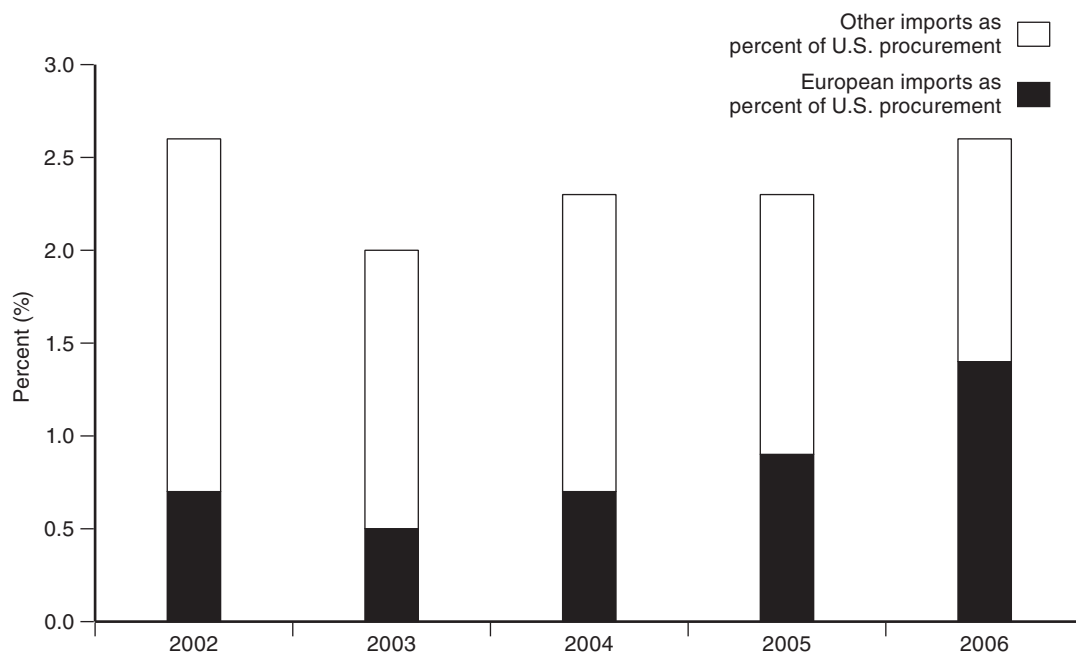
Europe has always been an important market for the U.S. defense industry. From the end of the Cold War through 2001, with the decline of global arms procurements generally, Europe's share of U.S. defense exports began to increase even as the total value of both European and global exports declined. In other words, while European defense procurement declined, it declined at a slower pace than did defense purchases in other parts of the world. With the outbreak of the wars in Iraq and Afghanistan, U.S. exports to Europe burgeoned while exports elsewhere remained largely constant (see Figure 45). *Thus, Europe as a share of total U.S. defense exports increased significantly, from roughly 30 percent in 2001, to a peak of 47 percent in 2005, before declining to 43 percent in 2006* (see Figure 46).

Relative Market Shares

Although Europe and the United States are becoming more dependent upon each other as customers for each other's defense exports, their relative share in each other's defense markets has remained relatively constant over time.

As can be seen by Figure 47, imports accounted for about 2-2.5 percent of U.S. defense procurement between 1987 and 1994, with European defense imports accounting for 1-1.5

Figure 48 European Imports as Percent (%) of U.S. Defense Procurement, 2002-2006

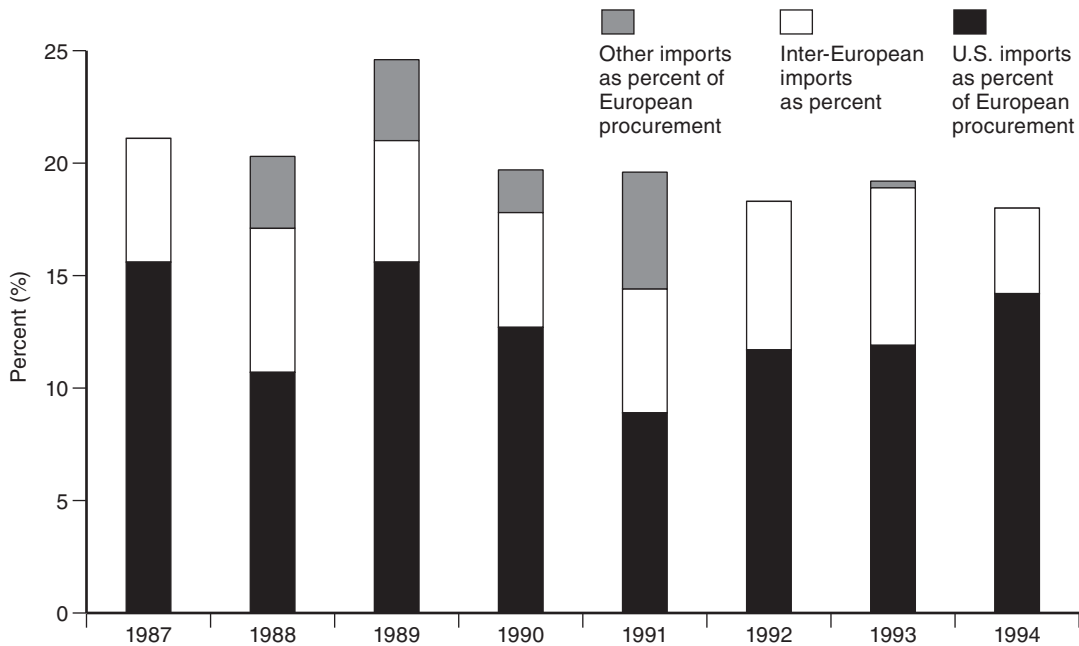


Source: IISS Military Balance 1994-1995; DoD Biennial Budget Submission, FY 2008.

percent (see Figure 48). For the period 2002-2006, imports still accounted for 2-2.5 percent of U.S. defense procurement. During that period, however, European imports rose from 0.5 percent of U.S. procurement in 2003 to just under 1.5 percent in 2006 (see Figure 49). Thus, although the magnitude (dollar value) of European defense sales to the U.S. has increased significantly, U.S. procurement has increased proportionally—resulting in a European market share back at its historical norms.

Imports have always accounted for a higher proportion of European defense procurement. Until recently, Europe was highly dependent on the United States for major weapon systems such as fighters, guided missiles and warships. However, that dependency has diminished over the past two decades with the emergence of a strong indigenous European aerospace and defense industry. During the period 1987-1994, imports accounted for about 20-25 percent of total European defense procurement. And, U.S. imports accounted for 10-15 percent of total European procurement during the period (see Figure 49).

Throughout the late 1990s, U.S. exports as a proportion of European defense procurement fell through a combination of reduced European defense spending and an emerging preference for European solutions to operational requirements. Programs such as Euro-fighter, Meteor BVRAAM and A400M displaced competitive U.S. systems such as the F-16 Fighting Falcon, AMRAAM (Advanced Medium-Range Air-to-Air Missile) and the C-17 Globemaster III. Accordingly, by 2002, U.S. imports accounted for only about 4 percent of European procurement.

Figure 49 Imports as Percent (%) of European Defense Procurement, 1987-1994

Source: IISS Military Balance 1994-1995; DoD Biennial Budget Submission FY 2008.

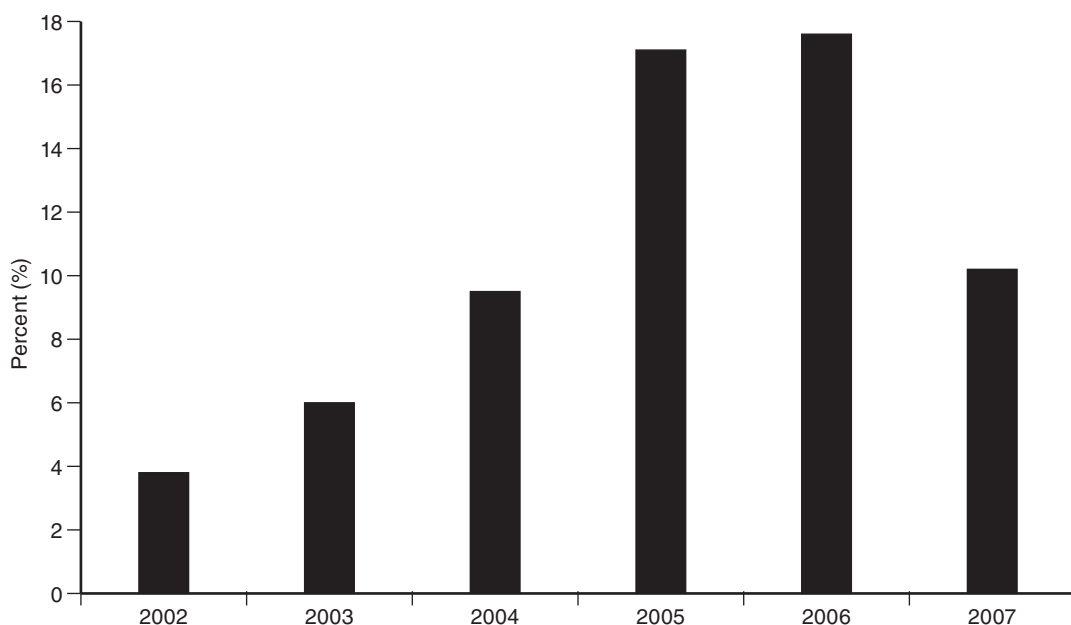
However, as European military forces began re-equipping to meet operational requirements for the wars in Iraq and Afghanistan (as well as to meet general security needs), U.S. imports began to account for an increasing proportion of European procurement spending. From a low of 3.8 percent in 2002, U.S. imports rose to 6 percent of procurement in 2003, 9 percent in 2004, and an astounding 34 percent and 22 percent in 2005-2006, before falling to a more modest 10 percent in 2007.

In sum, the U.S. market share in the European defense market today is roughly 5 to 6 times greater than the European share of the U.S. defense market (which can be seen by comparing Figures 48 and 50).

Global Market Share

The competition between the U.S. and European defense industries has a global as well as a Transatlantic dimension. Given the relatively smaller size of European defense budgets relative to the U.S. budget, European companies in general are more dependent on exports for their revenue base than are U.S. companies. Given the small size of defense budgets and markets in Europe, sizable European firms typically receive a small percent of sales from their home country customer. Thus, not surprisingly, the major European companies are receiving in the range of 66-75 percent of their revenues from non-domestic customers. In contrast, larger U.S. defense companies typically receive only 15-30 percent of sales from export customers. The need for export sales thus drives the European desire to penetrate

Figure 50 U.S. Imports as Percent (%) of European Defense Procurement



Source: IISS Military Balance 2008.

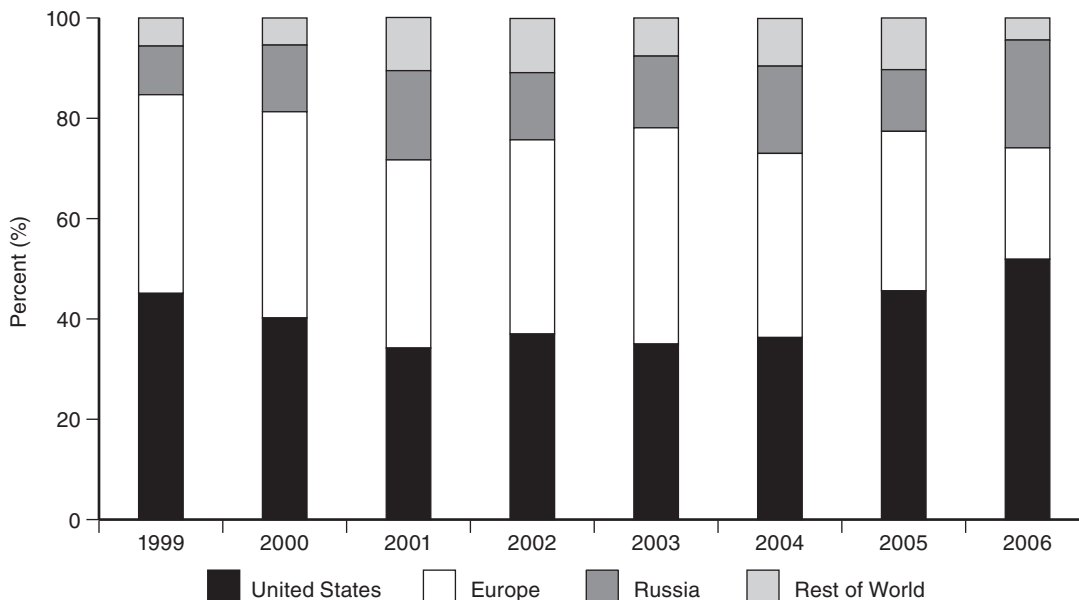
the U.S. defense market. Even if the U.S. defense budget is no longer growing significantly year over year, it is still the single largest source of defense contracts in the world.

Since 2001, the United States has captured an increasing share of the global defense market—primarily at the expense of Europe and Russia. By 2007, the United States had defense exports worth some \$14 billion, or roughly 51 percent of the global total of \$27 billion. At the same time, European defense exports have declined from \$10-14 billion in 2002-2004, to just \$6 billion in 2007; European global market share during that period declined from 43 percent to just 22 percent. See Figure 51.

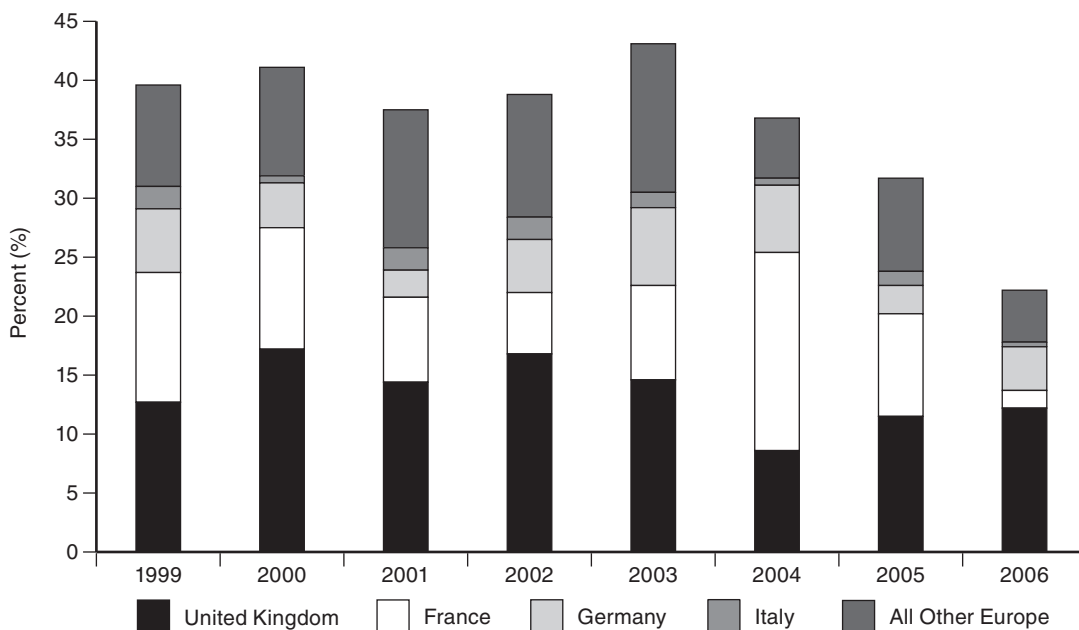
Viewed in this light, the long-term survival of the European defense industry hinges upon its ability to do several things: 1) capture most of the high value added programs in Europe (to the detriment of American suppliers); 2) penetrate more fully the U.S. market and increase the value added of its offerings; and 3) do better against American competition in the rest of the world.

Trade Flows and Market Share: Conclusions

Analysis of Transatlantic trade flow trends thus appears to support the conclusions of the market access analysis in Chapter 3. While U.S. exports to Europe increased significantly between 2004 and 2006, the “bulge” appears to be the result of meeting immediate requirements for operations in Iraq and Afghanistan, and not part of a long-term trend toward greater Transatlantic procurement. The subsequent decline in European purchases of U.S.

Figure 51 Global Defense Industrial Market Share

Source: IISS Military Balance 2008.

Figure 52 European Share of Global Defense Markets by Country

Source: IISS Military Balance 2008.

Table 13 Major European Competitions Involving U.S. Companies, 2002-2006

Program Name	Country	U.S. Competitor	European Competitor	Winner	Date
E-3 AWACS	UK	Boeing	BAE	Boeing	1989
AAQ-24 Nemesis DIRCM	UK	Northrop Grumman	BAE	Northrop Grumman	1995
Hellfire Longbow	UK	Lockheed Martin	LFK (MBDA)	Lockheed Martin	1995
WAH-64 Apache Longbow	UK	Boeing	Eurocopter	Boeing	1996
ASRAAM	UK	Raytheon	MBDA	MBDA	1996
CASOM	UK	Raytheon, Boeing	MBDA	MBDA	1996
Nimrod MR.4A	UK	Lockheed Martin	BAE	BAE	1996
IRIS-T	GE	Raytheon	BGT	BGT	1998
Airborne Standoff Radar (ASTOR)	UK	Raytheon	BAE	Raytheon	1999
Future Large Airlifter	Intern'l	Boeing	Airbus Industries	Airbus Industries	2000
Bowman Recompete	UK	General Dynamics	Thales Group	General Dynamics	2002
BVRAAM	UK	Raytheon	MBDA	MBDA	2002
Skynet V	UK	Lockheed Martin	Paradigm Communications	Paradigm Communications	2002
UK Future Aircraft Carrier	UK	RaytheonThales	British Aerospace	British Aerospace	2003
British Support Vehicle	UK	Oshkosh, Stewart & Stevenson	MAN, Mercedes Benz	MAN	2006

defense products in 2007 corresponds to the completion of European re-equipment for Iraq and Afghanistan as well as a drawdown of European forces in both conflicts.

Conversely, while there has been an increase in European exports to the United States, this includes primarily “niche” systems needed to support U.S. operations in Iraq and Afghanistan. Moreover, while there was an increase in the magnitude of European defense exports, European exports as a proportion of U.S. defense procurement has remained constant for more than a decade. On the other side of the ledger, while U.S. exports to Europe increased both absolutely and as a proportion of total European procurement, the trend peaked around 2006 and subsequent years show a decrease toward more historical norms. Thus, absent special circumstances (urgent operational needs or “niche needs”), the trade

Table 14 Results of Major European Competitions, 2006-2008 (Millions of Constant 2008 Dollars—\$)

Program	Competition Winner	Program 2006	Program 2007	Program 2008	Winner Country	Program TOTAL	Legacy	Customer Country	U.S. Bid
UK Support Veh	MAN	0.00	271.07	272.39	Germany	543.46	New	UK	Yes
BOWMAN	General Dynamics	107.06	107.06	80.29	U.S.	294.41	New	UK	Yes
InfoSys Heer	EADS	90.27	91.93	93.58	European	275.78	New	Germany	Unknown
UK DI increment 2b	EDS	0.00	58.09	184.44	U.S.	242.53	New	UK	Yes
Skynet 5 Mil. Comm Payload	EADS	171.36	33.79	6.27	European	211.42	New	UK	Yes
TTH90	NH Industries	0.00	55.73	151.34	European	207.07	New	Sweden	Yes
RGBC 180	Volvo Group	66.41	68.06	69.71	Sweden	204.18	New	France	No
SATCOM Payload Production	EADS	0.00	74.58	75.29	European	149.87	New	Germany	Yes
Bv206	BAE SYSTEMS	43.21	45.39	37.40	UK	126.01	New	Italy	No
HKP15TIS/IFT	Fimmeccanica	44.50	66.75	0.00	Italy	111.26	Legacy	Sweden	Unknown
MCMV Landsort Upgrade	ThyssenKrupp AG	34.46	34.46	34.46	Germany	103.38	Legacy	Sweden	No
Euro Hawk SIGINT	EADS	30.00	35.00	35.00	European	100.00	New	Germany	Yes
Bv206	BAE SYSTEMS	31.29	32.88	31.49	UK	95.66	Legacy	Germany	No
STR 2000 NGIFF	EADS	31.40	32.14	31.53	European	95.07	New	Germany	No
DHC-8-Q300	Bombardier	0.00	92.82	1.80	Canada	94.62	New	Sweden	No
RG-32M	BAE SYSTEMS	29.40	30.96	32.52	UK (U.S.)	92.88	New	Sweden	Yes
Modular Recon Pod	Terna A/S	25.94	27.97	30.01	Denmark	83.92	New	Sweden	Yes
Strv-122	Krauss-Maffei	27.10	26.99	26.89	Germany	80.98	Legacy	Sweden	No
A340-200 Services	Various	16.34	31.65	31.65	European	79.64	New	France	Unknown
Sicral 1 SATCOM Services	SITAB Consortium	26.24	26.24	26.24	European	78.72	New	Italy	Unknown
IRIS-T	Diehl	15.01	30.22	31.00	Germany	76.23	New	Sweden	Yes
C.295M Transport	EADS	4.70	4.70	64.30	European	73.6	New	Poland	Yes
UK Cormorant	EADS	33.50	33.78	2.03	European	69.31	New	UK	No
Bowman Training	Fimmeccanica	22.46	22.46	22.46	Italy	67.39	New	UK	Yes
BIGSTAF	Thales	6.19	29.61	29.94	France	65.75	New	Germany	Unknown
SATCOM 1m Term	SES Global SA	20.35	21.23	24.13	Luxembourg	65.72	New	Germany	Yes
S-1850	Thales	16.13	16.69	31.69	France	64.50	New	UK	Unknown
TRM 2000	Volvo Group	23.99	21.17	18.35	Sweden	63.50	New	France	Unknown
SATCOM 2.4m Term	SES Global SA	13.57	19.50	20.09	Luxembourg	53.16	New	Germany	Yes
Sweden HF 2000	Fimmeccanica	20.70	21.52	10.42	Italy	52.63	New	Sweden	Unknown
LEAPP AP1 - EADS	Lockheed Martin	27.00	25.00	0.00	U.S. (UK)	52.00	New	UK	Yes
TETRAPOL Sys	EADS	22.95	23.87	2.74	European	49.56	New	Germany	No

flow data seems to point toward somewhat more autarkic behavior in Europe and continued U.S. indifference to European imports except under specific circumstances (see below).

The erosion of the European defense industry’s global defense market also shows an industry under pressure from the United States, Russia, and rising powers such as Israel (fourth largest defense exporter after the United States, Russia and France). With European companies being far more dependent on exports than are their U.S. counterparts, their long-term survival depends upon excluding competition from their domestic markets, penetrating more fully into the U.S. defense market, and holding off the United States in the rest of the world.

Value Added: U.S. Presence on European Platforms

The quality of defense trade can be evaluated by examining the competitive posture of U.S. companies and the types of work they are performing (i.e., are they competing at the prime major subsystem level or the lower-tier contractor level in the market).

In the market access analysis in Chapter 3, we reviewed the extent to which U.S. firms can compete for awards in Europe (i.e., which awards were sole source, cooperative, and competitive). Here, we focus on a different outcome-oriented question: are U.S. companies winning these contracts that are competitive and do they have any meaningful role on the European cooperative programs?

Here the data raises concerns. As shown in Table 13, since the late 1980s, there have been fewer major European defense competitions (albeit more competition overall), with fewer awards to U.S. prime contractors. While Table 13 is by no means exhaustive, it does tend to suggest that U.S. companies have won prime contract awards in Europe primarily when there is no viable European competitor (e.g., E-3 AWACS) or a preferred European team was not able to perform (e.g., Bowman Recompete).

A review of major competitive programs valued at more than \$50 million for the last three years (2006–2008) in the European countries studied indicates that European defense competitions are generally won by European companies. As shown in Tables 14 and 15, out of 33 major competitions, U.S. companies won a total of three, for a win rate of 9.1 percent. If we limit the analysis only to those programs on which U.S. companies are known to have bid, the rate improves to 20 percent. But the impression given by Table 13 above appears to hold true: U.S. companies generally win only when: 1) the U.S. offering is so demonstrably superior as to be the only viable choice; 2) the United States already has a developed product that would otherwise have to be developed by a European source at a sizable expense; or 3) the European candidates prove unable to perform.

Table 15 Summary Results of Major European Competitions, 2006–2008

Total Programs	U.S. Bids	U.S. No-Bid	Unknown	U.S. Wins	U.S. Win Percent (Total Programs)	U.S. Win Percent (Known U.S. Bids)
33	15	9	8	3	9.1	20.0

An anecdotal review of recent European major programs also suggests that U.S. firms have increasingly less significant roles in the value chain. Thus, the U.S. content in Euro-

Table 16 U.S. Participation in Top 25 European Programs in Millions of Dollars (\$)

Program Name	2006	2007	2008	Total	U.S. Participation			
					System	Sub System		
						Major	Minor	Component
A400M	2,912	2,912	925	5,995			X	X
AW101	1,347	2,263	2,069	5,679		X		
S619 Le Terrible	1,550	1,559	1,568	4,678				
Rafale Multi-Role Fighter	1,623	1,132	1,367	4,122				
SSN Astute Class	943	1,275	1,378	3,596			X	X
DDG Type 45	913	1,117	1,123	3,152			X	X
Harrier GR.9A Upgrade	1,240	731	969	2,939				X
F-16 Falcon	435	1,146	947	2,527	X	X		X
Tornado	50	601	901	1,552				X
Eurofighter	2,392	653	536	1,387				X
UK Nuclear Sub Refueling	395	401	395	1,190				
Tiger	492	759	594	1,146			X	X
CV Queen Elizabeth	262	262	596	1,121				X
S620 Suffren	221	384	385	990				
ASMP Cruise Missile	428	241	241	910				
K-130 Corvette	300	302	202	804		X		
Patria XC-360P AFV	225	243	255	722				
KC-767A Tanker	231	237	244	712	X	X		X
CV Cavour	327	168	169	664		X		
TTH90	67	291	297	656		X		
UK RN Merlin Upgrade	15	255	357	628	X	X		X
Tornado Services	0	306	306	613				
TAURUS	68	259	266	593		X		
Porte-avions 2 (PA2)	74	110	407	591				
D617 Chevalier Paul	191	192	193	577				

Source: IISS Military Balance, 2008; Infobase DACIS Programs Database.

Note: U.S. participation indicates participation by U.S.-based entities, not European subsidiaries of U.S. companies.

pean systems has consistently fallen since the 1980s from the roughly 51 percent found in the SAAB JAS.39 Gripen to the relatively negligible U.S. content in the Eurofighter. Overall, the trend—especially in continental Europe—has been to push U.S. companies down the “food chain” to the role of second- or third-tier subcontractors, a move that has the effect of reducing U.S. profit margins on European programs.⁵⁵

A review of some key European cooperative and competitive programs illustrates this trend. As summarized on Table 16, these illustrative programs tend to reflect a very limited U.S. role in major cooperative European programs and a somewhat more robust, but still limited, U.S. role in major competitively awarded European contracts.

While U.S. firms have fared better on programs in the UK (e.g., Bowman tactical communications system, Future Rapid Effects Systems (FRES), ASTOR (Airborne Stand Off Radar), and Merlin Helicopter Upgrade program), their overall role across a wide range of UK programs still is relatively constrained, and in most cases limited to the second and third tiers. In several cases, U.S. companies were awarded prime contracts (e.g., Bowman) only after UK or European teams were unsuccessful.

European Cooperative Programs

In the last decade there has been considerable growth in cooperative programs, with European governments devoting considerable portions of their procurement budgets (20–30 percent) to multinational programs within Europe. This cooperation is concentrated mainly in aerospace, missiles and shipbuilding, where the costs of development are simply not supportable by national programs. There is little cooperative development in areas where national champions still dominate such as land systems, electronics and C4I (command, control, communications, computers, intelligence). Economic pressures are likely to force most new development programs in the future to be cooperative in nature. Few countries in Europe can afford national development programs of any magnitude.

As discussed in Chapter 3, because these international programs are generally negotiated through intergovernmental memorandums of understanding (MOUs), work share is closely defined and generally tracks with national contributions under the principle of *juste retour*. As a result, U.S. companies are usually excluded from roles as prime contractors or first-tier subcontractors, with exceptions made for European subsidiaries that generally function as European national companies.

As shown by the following description of the major European cooperative programs ongoing today, the U.S. role on these programs is limited in scope:

- **Eurofighter Typhoon.** On this leading European multirole fighter program, the European Aeronautical, Defence and Space Company (EADS) acts as prime contractor while U.S. companies (mostly their European subsidiaries) provide a number of subsystems. Avionics are provided by LITEF GmbH, a subsidiary of Northrop Grumman, which also provides electronic blanking and suppression systems. Teldix GmbH, another subsidiary of Northrop Grumman, provides the con-

⁵⁵ This point was made at a roundtable of the U.S. directors of the European offices of several major defense/aerospace companies held in Brussels in September 2002. The executives made clear that there was considerable work to be won by U.S. companies in Europe, but that it was mostly at the subcontractor level, and that this was not satisfactory to the corporate headquarters—likely because the margins on subcontract work are substantially lower than those of prime contractors.

trols, interfaces and flight computers. A third Northrop Grumman subsidiary, Litton Italia, provides the inertial navigation system, while TEAC America provides the airborne video recorder, and Electronic Designs provides computer memory products.

- **Meteor Beyond Visual Range Air-to-Air Missile (BVRAAM).** Matra BAE Dynamics defeated Raytheon Company for this next-generation missile intended to form the primary armament of Eurofighter. The winning team included Boeing in a limited role (in the view of some to allow it to give the appearance if not the reality of a true Transatlantic team). In the opinion of many U.S. industry and military observers, the award was made on political rather than technical grounds.
- **Advanced Short-Range Air-to-Air Missile (ASRAAM).** Intended as the secondary armament of Eurofighter, U.S. participation is limited to the seeker, which is being designed by Raytheon.
- **A400M Future Large Airlifter.** Airbus is developing this alternative to the U.S. C-17 Globemaster III without any significant U.S. participation (a major departure from Airbus Industries' normal commercial practices, which usually involve significant U.S. participation at the component and subsystem levels). As noted, Airbus decided to award the \$2.8 billion engine contract to the Europrop International GmbH (EPI) consortium (Snecma, Rolls-Royce, MTU Aero Engines and Industria de Turbo Propulsores, or ITP) rather than to United Technologies even though the U.S. firm had both a lower cost and an actual prototype engine.
- **Tiger Attack Helicopter.** There is no significant U.S. participation in this Eurocopter-developed competitor to the Boeing AH-64 Apache.
- **F100 Aegis Frigate.** This joint Spanish-Norwegian program is unique in having a U.S. prime contractor (Lockheed Martin), although the ship's hulls, engines and ship systems will be of European origin. This is an acknowledgment of the primacy of combat systems over platforms. As the developer of the Aegis radar and combat system, Lockheed Martin plays the lead role as systems integrator and also provides the ASW Combat System. The Mk 41 Vertical Launching System will be provided by UDLP (United Defense, Limited Partnership, now part of BAE Systems) while the NATO Sea Sparrow Missile is being developed by a multinational consortium led by Raytheon.
- **MRAV/GTK.** This UK-German-French-Netherlands program to develop a multirole wheeled armored vehicle was the first program managed by OCCAR (Organization for Joint Armament Cooperation). With the decision of the UK to drop out, it may be the first OCCAR program to be terminated. From the beginning, it was clear that this was a European-only program. Apparently few if any American companies submitted proposals to participate.

Competitive Programs

As also discussed in Chapter 3, European defense procurement has become increasingly competitive. While U.S. companies seldom win a major competition if there is a viable European competitor, competitive programs tend to be more open to U.S. participation at higher levels than in cooperative programs.

A review of the top 12 major European competitive program awards in 2006-2008 by value illustrate the range of participation U.S. companies have in such programs:

- **JAS.39 Gripen.** In this Swedish multirole fighter, SAAB Aerospace is the prime contractor, but U.S. companies provide key mission systems, such as cockpit displays (L-3 Communications), the electronic warfare suite (Signal Technology Corp.), flight controls (BAE Systems North America), air data computers (Honeywell Systems), the mission computer (Mercury Computer Systems) and external fuel tanks (Sargent Fletcher, Inc.). As noted, U.S. content accounts for about half the total value of the aircraft. Although Gripen is a sole source Swedish national program, it is also a competitor for international fighter programs (e.g., Poland, Romania, Hungary, Norway), and as such Saab has a vested interest in procuring both the best and the lowest-cost subsystems and components.
- **Airborne Stand-Off Radar (ASTOR).** This is a rare example of an American-led team (prime contractor Raytheon Systems, Ltd.) winning a major European competition. It did so mainly because British Aerospace (now BAE Systems) did not have the wherewithal to develop this highly complex ground surveillance radar system indigenously. Thus, in addition to Raytheon's role as prime, it is also developing the radar system (Raytheon Electronic Systems) while Motorola UK develops the ground stations and software, Cubic Defense develops the display systems, and Logica Aerospace develops the Joint Tactical Information Distribution System (JTDIS) data link host processor.
- **CV Queen Elizabeth (UK Future Aircraft Carrier).** Although BAE Systems and Thales share joint prime contractor duties on this program, Northrop Grumman retains a significant role in system design—although the downsizing of the carrier from 65,000 to 40,000 tons may cause a reshuffling of the contractor team.
- **Nimrod RMPA.4.** The award decision on the maritime patrol aircraft program was controversial because numerous industry observers thought that Lockheed Martin had a superior offering in its Orion 2000 aircraft, particularly with respect to the combat system.⁵⁶ Nonetheless, BAE Systems won the contract to "rebuild" older Nimrod anti-submarine warfare (ASW) aircraft (actually, only about 20 percent of the old aircraft is reused), with Boeing assisting as tactical command systems integrator and provider of certain tactical command systems modules.
- **CASOM/SCALP/Storm Shadow.** Intended as the primary air-to-ground standoff weapon of the Eurofighter and Rafael, this tactical missile was developed by Matra BAE Dynamics from a French design. In 1996, it won the British CASOM standoff weapon competition over a Boeing-designed "Tactical Tomahawk"—another decision that some believe was politically motivated.
- **UK Support Vehicle.** A program to develop a new family of logistic vehicles for the British army saw a range of European and U.S. offerors, including Stewart & Stevenson, Oshkosh, MAN, Volvo, and Mercedes Benz. Although the prime contract was awarded to MAN, a number of U.S. companies including Oshkosh, Lockheed Martin and BAE Land Systems (which now includes Stewart & Stevenson by virtue of its Armor Holdings acquisition) have significant roles in the program in areas such as armor and survivability, vehicle electronics, and automotive systems.

⁵⁶ Given BAE's problems in developing and producing the aircraft, these observers might seem vindicated.

- **Bowman.** The British C4I (command, control, communications, computers, intelligence) program was originally awarded to British Aerospace (now BAE Systems) in 1999. After numerous technical problems and program delays, the British Ministry of Defence (MoD) reopened the competition in 2000, with the new contract awarded to Computing Devices Canada, which was later acquired by General Dynamics. Radio systems were delivered by ITT, which also received a contract to develop an interface between Bowman and the U.S. Joint Tactical Radio System (JTRS).
- **Skynet V.** This program to establish a Privately Financed Initiative (PFI) to develop and operate the next generation of UK military communications satellites was competed between the Lockheed Martin/British Telecom joint venture and the Paradigm Secure Communications Consortium of Astrium, TRW, Motorola, Serco, Nortel, Logica and Cogent. Though the Paradigm team won, the United States retains a significant presence in the program, with Lockheed Martin providing the satellite bus, L-3 Communications the tracking and telemetry system, and General Dynamics the command and control interface.
- **UK Defense Information Infrastructure.** Awarded in 2005, this program to update the British MoD's defense information technology (IT) systems is worth some \$8.3 billion over the 20-year life of the contract. Electronic Data Systems (EDS) led the winning team, but the losing team was also led by the U.S. firm Computer Sciences Corporation.
- **Polish Tactical Transport.** In August 2001, Poland awarded a \$212 million contract to EADS CASA for up to twelve C.295 twin-engine transport aircraft. The losing teams included the Lockheed Martin/Alenia C-27J Spartan and the Antonov An-32. Industrial participation was a major determinant in the award, with EADS CASA agreeing to buy a Polish aerospace company and assemble the aircraft in Poland.
- **Polish Fighter Competition.** Poland awarded a \$3.5 billion contract to Lockheed Martin for delivery of 48 F-16 Fighting Falcon multirole fighters. Other competitors included the Eurofighter Typhoon and the Saab Gripen. In this case, the award was largely determined by the size of Lockheed's offset package and the very attractive financing arrangements put in place by the U.S. government, which made the U.S. offer financially attractive and beyond the ability of its competitors to match.
- **Norwegian Fighter Competition.** In November 2008, Norway selected the Boeing F-35 Joint Strike Fighter (JSF) to replace its existing fleet of Fighting Falcons. Competing offers from Eurofighter and the Saab Gripen were rejected largely on the basis of the JSF's superior capabilities and the promise of meaningful industrial participation and technology transfer, which overcame reservations about the escalating cost of the new aircraft.

U.S. Participation in European Programs: Conclusions

Analysis of actual U.S. participation in European defense programs essentially confirms the paradox we identified in Chapter 3. European defense procurements, while becoming more competitive, are not more open to U.S. firms for a number of reasons.

First, as shown above, due largely to budgetary constraints, the number of major European programs being initiated each year has fallen from an average of 5 or 6 per year in 1995-1996 to only one or two per year today. This alone reduces the opportunity for U.S. companies to compete in the European market. Moreover, the dearth of new starts has also created an incentive to keep any new programs “all European” if at all possible.

Second, the cooperative European programs, which have grown as a percentage of European defense spending, are not competed and largely exclude U.S. defense firms from significant participation. As shown above, U.S. companies are generally excluded from lead positions and key subsystems if allowed to participate at all. Increasingly, the U.S. role in such programs is limited to the component level, which has low value added and low margins.

Third, of those programs ostensibly open to them through competitive awards, only a few have been won by U.S. prime contractors. Most often, this occurs either because there is no viable European alternative or after an initial all-European effort fails.

European Participation in U.S. Defense Programs: Procurement and Research, Development, Testing and Engineering (RDT&E)

As discussed in the trade flow analysis above, there is relatively little European participation in U.S. defense procurement, with European imports constituting only about 1.5 percent of total U.S. procurement. Thus, not surprisingly, there is very limited European involvement in major U.S. transformational programs, such as Future Combat System, MC2A, Global Hawk.

Procurement. Specifically, European participation in the U.S. procurement is very limited in absolute terms and in comparison to U.S. participation in European programs. Note that only one of the top three European defense companies, BAE Systems, is among the top 10 firms in U.S. prime contract awards—ranking fifth at \$18.5 billion (6.8 percent market share).⁵⁷ The other leading European defense companies, EADS and Thales, have only \$1.7 billion and \$1.3 billion (0.6 and 0.5 percent market share) respectively.

It should be noted that most of those contracts were actually won by U.S. operations or subsidiaries of European-owned companies, not by business units operating out of Europe itself.⁵⁸ Many of these prime contracts, particularly in the case of BAE Systems, are “legacies” accruing to the foreign company as a result of the acquisition of U.S. companies (e.g., Lockheed Martin’s Sanders Electronic Systems in the case of BAE).

Based on interviews with market participants, we believe that European participation at the subcontractor level in the U.S. defense market is deeper and more varied.⁵⁹ However, meaningful data on subcontractor sales in the United States is very difficult to obtain, as the Department of Defense (DoD) has confirmed.⁶⁰ Yet, on balance, the overall trade flow

⁵⁷ Federal Procurement Data System—Next Generation (FPDS-NG). Available at: <https://www.fpds.gov/>.

⁵⁸ This does not count DRS Technologies sales, which will now accrue to Finmeccanica.

⁵⁹ In interviews with DoD and industrial representatives repeatedly stated that the United States is using considerably more European technology today, though most of it is at the second and third tier subsystem and component level. In many instances, European companies license co-production of these products to U.S. teaming partners or form joint ventures to perform production on shore.

⁶⁰ See GAO-06-319R, *Defense Trade Data*, U.S. Government Accountability Office, January 2007. Available at: <http://www.fas.org/asmp/resources/govern/109th/GAO06319r.pdf>.

Table 17 European Participation in Top 25 U.S. RDT&E Programs in Millions of Dollars (\$)

Program Name	2006	2007	2008	Total	System	U.S. Participation		
						Sub System		
						Major	Minor	Component
F-35 Joint Strike Fighter	4,451	4,295	3,487	12,233		X		X
Future Combat System	3,219	3,389	3,563	10,171			X	X
DDG 1000	1,052	808	503	2,363			X	X
Joint Tactical Radio System	371	796	853	2,020		X		
E-2C Hawkeye	619	505	831	1,955				X
VH-71 Marine One	897	630	271	1,798		X		X
MUOS Communications System	449	662	611	1,722			X	
F-22 Raptor	413	472	743	1,628				X
Littoral Combat Ship	584	329	217	1,130		X		X
FA-18G Growler	379	372	272	1,023				
Expeditionary Fighting Vehicle	243	347	288	878		X		X
CVN-78 Ford Class	300	307	232	839				
RQ-4 Global Hawk	257	247	298	802				X
C-130 Hercules	243	271	262	776		X		X
B-2 Bomber	281	241	244	766				X
SSN-774 Virginia Class	168	201	224	593				
C-5M Galaxy	225	150	203	578				X
V-22 Osprey	192	267	118	577			X	X
Standard Missile SM-3	148	176	231	555			X	X
C-17 Globemaster III	160	173	181	514				X
AH-64 Apache	104	122	193	419		X		X
F-15 Eagle	135	137	101	373				X
F-16 Falcon	124	152	90	366			X	X
KC-X Tanker	24	69	214	307		X		X
UH-72 Lakota (LUH)	88	131	82	301	X	X		X

Source: IISS Military Balance, 2008; Infobase DACIS Programs Database.

Note: U.S. participation indicates participation by U.S.-based entities, not European subsidiaries of U.S. companies.

figures noted above, which include all such subsystem sales, indicate that total European subsystem and product sales in the United State still do not amount to a significant percentage of U.S. procurement.

Signs of Change in European Participation. As discussed in Chapters 3 and 14, this situation appears to be changing. A review of new U.S. major programs in select market areas does show European firms obtaining approximately 28 percent of new U.S. buys in 2006-2008)⁶¹ (see Figure 6). On the other hand, as discussed above, the data for *all* DoD programs (new and old, without dollar limits) in *all* sectors, including the large service sector, shows that European participation in the overall U.S. defense market remains low. Thus, Figure 6 is a useful leading indicator in new buying in select major weapon system areas while the data here is a useful indicator of overall European participation in total existing U.S. programs.

Table 18 U.S. Cooperative RDT&E Programs⁶² in Millions of Dollars (\$)

Program Name	Participants	FY 2005	FY 2006	FY 2007
Coalition Warfare	Many	12,999	13,588	5,845
DIRCM	UK	7,133	7,789	17,461
Foreign Comparative Testing	Many	35,633	36,899	31,812
HARM Upgrades	GE, IT	1,969	3,663	1,883
Joint Strike Fighter	DK, NE, CA, IT, NO	2,080,058	2,333,009	1,999,068
JTRS	UK	36,109	81,036	219,061
MEADS	GE, IT	251,298	0	0
MIDS	Many	15,130	87,802	128,769
Missile Defense	UK, IT, GE, JP	11,809		
MLRS	GE	105,395	113,652	74,506
NATO Evolved Sea Sparrow	Many	17,934	5,745	4,899
Patriot PAC-3	GE, IT	344,978	304,973	336,959
Rolling Airframe Missile	Many	11,553	28,404	41,511
Standard Missile	Many	110,775	148,482	176,467
Total		3,042,773	3,165,042	3,038,241

Source: U.S. Department of Defense, Biennial Budget Estimates, FY 2008.

⁶¹ More specifically, the data here on overall U.S. procurement and RDT&E includes all market areas, the large service market as well as systems, and spending on legacy as well as new programs. The data on Figure 28 in Chapter 3 includes only new purchases of major defense systems (exceeding \$100 million) in the select program areas being studied. Hence, it is a useful indicator of trends in new buying but not in overall European participation in existing U.S. programs.

⁶² While the Missile Defense program continues to have a robust international component, changes to the Missile Defense Agency (MDA) budget format have removed international cooperation as a distinct line item and subsumed it in the line items for other program components. Hence, there is no separate figure for this program in 2006-2007, and total international participation is difficult to track. Note that with a total budget of some \$10 billion, including procurement, MDA does not in itself have significant resources to devote to cooperative RDT&E. What is being done focuses at present mainly on the development of system architecture and C4I, mainly through NATO as well as through bilateral agreements with Japan and Israel.

RDT&E. Very few U.S. research and development (R&D) contracts have been awarded to offshore divisions of European companies (as distinct from their U.S. subsidiaries). Specifically, Table 17 sets forth the 25 largest U.S. RDT&E programs over 2006-2008 (other than cooperative programs discussed below) and highlights the role of foreign defense firms in each program. As the data reflects, with the exception of the JSF, there is minimal foreign participation in these programs—whether the programs relate to network-centric warfare or other transformational areas.

Transatlantic Cooperative RDT&E Programs. Moreover, U.S.-European cooperative RDT&E initiatives are extremely limited at present as well. A list of virtually all U.S. RDT&E programs that have a cooperative or international component is set forth in Table 18. In particular, it should be noted that the JSF program alone accounted for \$1.99 billion or 87 percent of the total U.S. cooperative engagement in RDT&E with Europe. Thus, excluding JSF, only approximately \$1 billion per annum in \$75 billion U.S. RDT&E budget—approximately 1.3 percent of the total—is performed on a cooperative basis. It should be noted, of course, that the same type of analysis could be undertaken for the limited European research and technology (R&T) funding, which is also done primarily on a national basis.

Significantly, the list of programs offers no overriding strategic purpose or plan such as the general promotion of force interoperability. Rather, it is a hodgepodge of programs that, for various reasons at various times, were done cooperatively. The rationale is typically specific to the program. In the case of JSF, for example, the international participation was viewed as critical to the program's affordability and, hence, its viability. In the case of several Navy missile programs, the degree of cooperation reflects long-standing historical relations between the United States and allied navies that became users of U.S. shipboard missile systems several decades ago; this cooperation also was shaped by and benefited from co-production and co-development agreements.

The cooperative programs identified above, with few exceptions, are the fruits of agreements negotiated in the 1980s and '90s, when the United States sought a greater degree of Transatlantic defense cooperation to develop new technologies and capabilities in an affordable manner. There have been few cooperative program starts other than Missile Defense in recent years.

During the Clinton Administration, there was some increased focus on enhancing cooperation, which resulted in several of these program starts—expressed in the Quadrennial Defense Review and elsewhere.⁶³ Of perhaps most significance, then Secretary of Defense Cohen issued a policy memorandum in 1997 directing more and early commitment to international programs.⁶⁴ The memorandum states that “[i]n the evolving environment of coalition warfare, limited resources, and a global industrial and technology base, it is DoD policy that we utilize International Armaments cooperation to the maximum extent feasible, con-

⁶³ This theme is highlighted in numerous speeches and articles. See, e.g., Speech by Paul J. Kaminski, Under Secretary of Defense for Acquisition, Technology and Logistics, “International Partnerships Beyond 2000,” ComDef’ 1996 Conference, Washington, D.C. (April 1, 1995). Available at: <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=AD A339272&Location=U2&doc=GetTRDoc.pdf>. See also, e.g., “International Armaments Cooperation for the New Millennium,” Speech by Paul J. Hooper, Deputy Under Secretary of Defense for International and Commercial Programs, Defense Industry Consultative Committee (DICC) Meeting Dinner, Arlington, Virginia (June 3, 1997). Available at: http://www.disam.dscs.mil/pubs/Indexes/Vol%2020_1/Hooper.pdf.

⁶⁴ “DoD International Armaments Cooperation Policy,” Memorandum from the Secretary of Defense to Numerous Addressees (March 23, 1997) Available at http://www.dod.gov/pubs/foi/reading_room/918.pdf.

sistent with sound business practice and with the overall political, economic, and national security goals of the United States.” Thus, in 1995, DoD created the internal DoD International Cooperative Opportunities Groups (ICOGs) to create a more disciplined process for identifying individual programs with high potential for international cooperation.⁶⁵ In 1997, Advanced Concept Technology Demonstrations (ACTDs) were opened to allied governments. The 1996 version of the DoD 5000.1 directive on the “Defense Acquisition System” set out a hierarchy of acquiring defense equipment that places commercially available equipment from allies and cooperative development programs ahead of new U.S. equipment development programs.

Later in the Clinton years, however, as discussed fully in Chapter 6, the focus shifted more to “bottom up” industrial cooperation than “top down” cooperation programs. Thus, each service was left to decide on its own whether to pursue cooperative engagement when and if it made sense in a programmatic context. In that context, few DoD components have over the years come forward and proposed serious armaments cooperation programs.

Subsequently, in the Bush Administration, the overriding focus on war fighting requirements tended to push defense cooperation into the background except when it addressed immediate operational requirements or a strategic policy such as missile defense.

Today, the ICOG process is apparently still in operation and there are a number of different fora for international armaments cooperation.⁶⁶ The most important is probably the NATO Council of National Armaments Directors (CNAD) and Five-Power meetings of armament directors from the United States, the UK, France, Germany and Italy.

While many memorandums of understanding have been signed to initiate cooperation over the years, few have evolved into full-scale programs. To date, the results have been sparse. However, the ICOG process has resulted in a number of small-scale cooperative programs in areas such as unmanned air vehicles, combat ID, mine countermeasures, and interoperable communications.⁶⁷ Interestingly, as discussed in Chapter 5, the European armament directors have adopted something like the ICOG process for identifying areas for cooperation within Europe as well as to develop a common European position going into CNAD meetings.

The relative lack of Transatlantic cooperative programs also reflects several other underlying factors on both sides of the Atlantic. First, in the United States, the absence of DoD leadership support for cooperative programs means that DoD components will seek this alternative only if they need to (e.g., in order to lower costs per unit or obtain needed funding from foreign partners as in the case of the JSF). Given the large budgets in the United States in recent years, there has been less motivation for services and program offices to seek foreign participation in their programs. In most cases, DoD components have been able to move their programs forward without it.

⁶⁵ E. Kenneth Hong Fong, *OSD Discussions on ICOG ITC Task Force Opportunities*, DUSD(AT&L) S&TS/IO, 2002. Available at <http://www.omg.org/docs/c4/02-09-02.pdf>.

⁶⁶ For a full review of various fora for international armaments cooperation, see *International Armaments Cooperation Handbook*, Office of Director for International Cooperation, Office of Under Secretary of Defense for Acquisition, Technology & Logistics. Available at: <http://www.acq.osd.mil/ic/handbook.pdf>.

⁶⁷ E. Kenneth Hong Fong, *OSD Discussions on International Cooperative Opportunity Group, Interoperable Tactical Communities, Task Force Opportunities*, OUSd(AT&L) S&TS/IO, September 2002. Available at: <http://www.omg.org/docs/c4i/02-09-02.pdf>.

In Europe, small defense budgets are in fact driving armaments cooperation—but primarily European cooperation in light of geopolitical considerations. There has been little European reach out for these types of efforts with the United States.

Finally, the relative lack of enthusiasm on both sides of the Atlantic reflects not only underlying geopolitical and budgetary realities, but the sustained practical problems encountered in these programs. Virtually every major Transatlantic cooperative program has been plagued by a series of problems: differential levels of support for the program in different countries; different budget cycles and unstable funding; changing requirements on one side or the other; serious problems over technology transfer; and serious cost overruns and schedule delays.

In short, while there have been some successful Transatlantic cooperative programs (for example, the Harrier and the Rolling Airframe Missile programs), there also have been a long history of problems highlighted in numerous studies over the years and a recognition that many of the theoretical benefits of international cooperation (political, economic and operational) are difficult in practice to achieve.⁶⁸

Foreign Direct Investment in Europe and the United States

Market access can also be achieved through buying into the market through mergers and acquisitions. The data shows two distinct patterns for European and U.S. firms.

European Acquisitions of U.S. Defense Firms

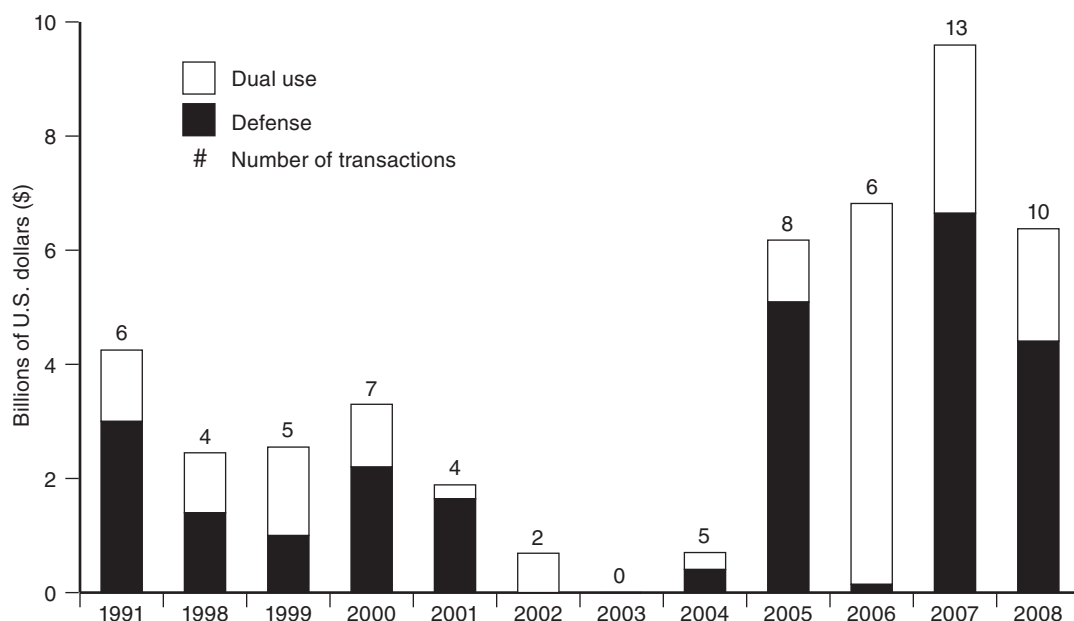
As shown on Figure 53 the last decade has seen a changing pattern of European acquisitions that reflect to some degree changing U.S. policies on foreign acquisitions of U.S. firms that relate to defense and critical infrastructure (homeland security, information technology, communications and related areas).

In the late 1990s, as the world economy globalized at an increasing rate, European acquisitions of aerospace, defense and homeland security firms averaged consistently between \$2 and \$3 billion per annum, as shown on Figure 53. During this period, as discussed in Chapter 6, the Clinton Administration signaled an openness to Transatlantic defense mergers and acquisitions in order to promote competition in consolidating defense markets. Thus, major defense acquisitions were approved, including most notably BAE System's acquisition of GEC Marconi (a UK-based firm that owned significant and sensitive U.S. defense assets, including Tracor—a designer, developer and producer of avionics and electronic warfare systems and a systems engineering company providing analysis on threat capabilities and countermeasures), and a major joint venture between Raytheon and Thales SA covering air defense and ground radar as well as command and control.

Subsequently, however, the environment for European acquisitions of U.S. defense firms changed. The Bush Administration came to office with different priorities (e.g., missile

⁶⁸ See, e.g., Birkler, J., Lorell, M., and Rich, M., "Formulating Strategies for International Collaboration in Developing and Producing Defense Systems," RAND Issue Paper (1997) ("Despite a long record of international procurement collaboration among European partners and between the United States and its allies, the outcomes of past programs have been, at best, rather mixed. Attaining many, if not most, of the potential economic, operational, and political benefits that theoretically should flow from joint R&D and production programs has proven difficult..."). Available at: http://www.rand.org/pubs/issue_papers/2006/IP161.pdf.

Figure 53 European Acquisitions of U.S. Defense, Aerospace and Security Companies



Source: Defense Mergers and Acquisitions.

defense) and was agnostic at best to the notion of Transatlantic defense collaboration—and more focused on addressing the perceived fragilities of the domestic defense industry. Moreover, as discussed in Chapter 3 and Chapter 13 (covering the United States), a series of subsequent events—September 11, the U.S. rift with key European Allies over Iraq, and the Dubai Ports controversy—resulted in a more restrictive U.S. attitude toward foreign acquisitions that related to national security.

This changing approach is reflected in the data. As shown on Figure 53 and Table 19, there was a noticeable decline in the number and value of European acquisitions of aerospace, defense and homeland security transactions in 2001-2004; European acquisitions in the United States declined from seven transactions in 2000, to 4 in 2001, to two in 2002, and none in 2003.

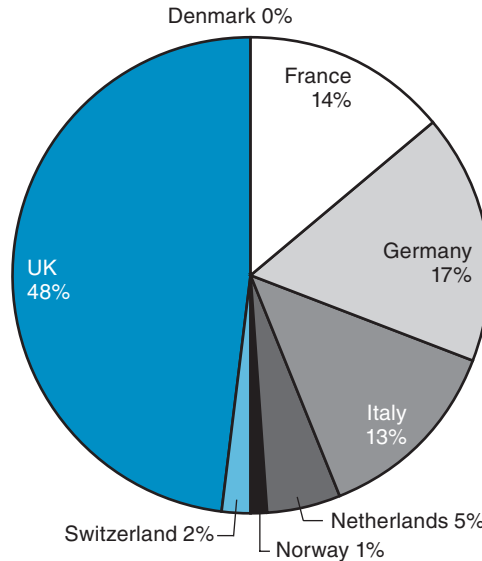
Subsequently, however, as the second Bush term proceeded and U.S. relations with our European Allies improved, the number and value of transactions increased significantly; the value rose from \$700 million in 2004 and peaked to more than \$9.5 billion in 2007; total European mergers and acquisitions averaged more than \$7 billion from 2005-2008 (see Table 19).

Table 19 European Acquisition of U.S. Companies: Defense vs. Dual-Use Transactions in Millions of Dollars (\$)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Defense	3,000	1,400	1,000	2,200	1,645	0	0	405	5,092	144	6,647	4,404
Dual Use	1,250	1,050	1,550	1,100	243	690	0	297	1,085	6,675	2,948	1,972
Number	6	4	5	7	4	2	0	5	8	6	13	10

Source Infobase Publications, *Defense Mergers and Acquisitions*.

Figure 54 European Acquisitions of U.S. Defense, Aerospace and Security Companies by Country

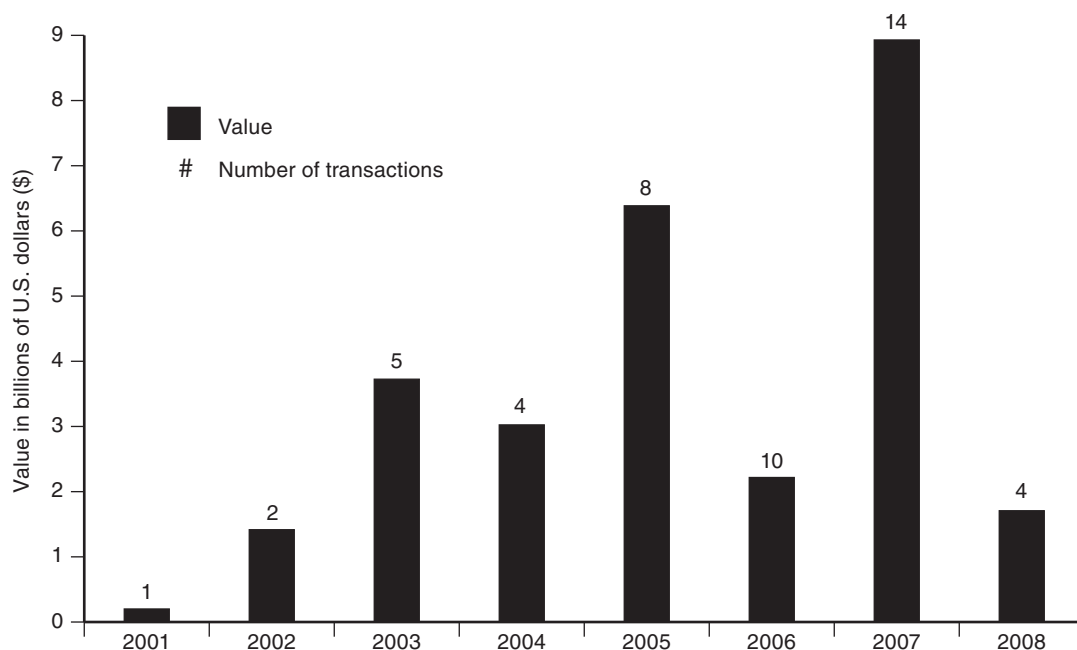


Source: Defense Mergers and Acquisitions.

The details of these transactions are presented in Table 19. There are several noteworthy points about these acquisitions:

- Most of the U.S. firms acquired were not predominantly defense firms.** The Defense Mergers & Acquisitions database we utilized includes aerospace, defense, and homeland security firms, including information technology firms, telecommunications firms and others. While the data on Table 19 shows only the total numbers of transactions, our detailed review of the acquisitions shows that few of the firms acquired primarily served defense markets, the subject of this study. However, the few defense companies acquired tended to be larger and accounted for a significant share of total acquisitions in value terms (e.g., BAE Systems' acquisitions of UDLP and Armor Holdings).
- British firms made the majority of acquisitions.** Not surprisingly, as shown on Table 20, roughly 54.5 percent of all acquisitions (in terms of value) were made by British companies, with 29 total transactions worth more than \$15.5 billion. This reflects the "special" relationship between the United States and the UK, and the close degree of defense industrial cooperation. What is noteworthy is that most of the true U.S. defense firms of any size (except Finmeccanica of Italy's acquisition of DRS Technologies) were by UK firms. This includes a series of acquisitions by BAE Systems among others. German companies ranked second, with three acquisitions worth \$5.5 billion; French companies were third, with nine transactions worth \$4.6 billion; and Italian companies were third, with two transactions worth more than \$4 billion. However, most non-UK acquisitions were primarily in non-defense markets (e.g., BASF of Germany's acquisition of Englehard, a firm focused on environmental controls, for \$5 billion in 2006).

Figure 55 U.S. Acquisitions of European Defense, Aerospace and Security Companies, 2001-2008



Source: Defense Mergers and Acquisitions.

- **There were only three noteworthy (and large) defense acquisitions during 2001-2008, only two of which involved prime level U.S. firms:**
 - **BAE System's acquisition of United Defense Systems** in 2004 (\$4.1 billion), which turned BAE into a major competitor in the U.S. ground combat systems;
 - **BAE System's subsequent acquisition of Armor Holdings, Inc.** in July 2007 (\$4.5 billion), which strengthened its position. A provider of personal and vehicle armor and an integrator of tactical vehicles, Armor Holdings gave BAE a full, vertically integrated spectrum of offerings in military ground vehicles (ranging from heavy to light combat vehicles to tactical trucks and transports) equaled only by General Dynamics Land Systems; and
 - **The Italian defense firm Finmeccanica's acquisition of DRS Technologies, Inc.**, a leading electronics and sensor subsystem firm in 2008 (\$3.9 billion), which allowed Finmeccanica to establish a major presence in the U.S. defense market and a role on a host of major U.S. programs in all three services.
- **Most of the European acquisitions were subsystem firms and suppliers.** The large majority of European acquisitions in this period did not involve major system houses or prime contractors, but rather the acquisition of second- and third-tier subcontractor/supplier companies, many with a broader dual-use/commercial aerospace focus. Through these acquisitions, European companies have been able to establish themselves in critical positions in the supply chains of major U.S. defense

Table 20 Key European Acquisitions of U.S. Defense, Aerospace and Security Companies, 2001-2008 in Millions of Dollars (\$)

Date	U.S. Company	European Buyer	Country	Price	Revenue	Business Area	Defense/ Dual Use
Dec 2008	Manitowoc Company-Marine Segment	Fincantieri SpA	IT	120	323	Shipyard	Defense
Oct 2008	DRS Technologies, Inc.	Finmeccanica SpA	IT	3,940	3,300	Defense Electronics	Defense
Sep 2008	M/A-COM (Tyco Electronics)	Cobham plc	UK	380	477	RF Subsystems	Dual Use
Aug 2008	Dominion Technology Resources, Inc.	QinetiQ Group plc	UK	104	47	Mission Integrated Solutions	Defense
Aug 2008	Cherry Corporation	ZF Friedrichshafen AG	GE	400	400	Automotive Electronics	Dual Use
Jul 2008	Hawker Beechcraft Services	BBA Aviation plc	UK	128	73	Aviation MROU Services	Dual Use
Jun 2008	MTC Technologies, Inc.	BAE Systems plc	UK	450	415	Equipment Integration & Modernization	Dual Use
Jun 2008	Odyssey Industries, Inc.	Hampson Industries plc	UK	314	NA	Aerospace Tooling	Dual Use
Jun 2008	Digimarc Corporation	SAFRAN SA	FR	300	97	Security and Identity Management	Dual Use
Feb 2008	BAE (NA) Surveillance & Attack Business	Cobham plc	UK	240	91	Electronic Warfare	Defense
Dec 2007	Carpenter Advanced Ceramics	Morgan Crucible Co. plc	UK	147	91	Ceramic materials	Dual Use
Aug 2007	Pelco, Inc.	Schneider Electric SA	FR	1,220	506	Video Security Systems	Dual Use
Jul 2007	Armor Holdings, Inc.	BAE Systems plc	UK	4,532	2,361	Armor Solutions	Defense
Jul 2007	Zantaz, Inc.	Autonomy Corporation plc	UK	375	100	Digital Archiving	Dual Use
Jun 2007	K&F Industries, Inc.	Meggitt plc	UK	1,800	424	Military Wheel and Brake Assemblies	Defense
Jun 2007	Teleflex Aerospace Manufacturing Group	GKN plc	UK	135	135	Aerospace Subsystems	Dual Use
May 2007	Global Design Solutions	Bridgepoint Capital, Ltd	UK	343	93	Aerospace Couplings	Dual Use
May 2007	FastenTech, Inc.	Doncasters, plc	UK	492	410	Aerospace Fasteners	Dual Use
Apr 2007	ITS Corporation	QinetiQ Group plc	UK	90	77	Government IT Solutions	Dual Use
Apr 2007	SPX Contech	Marathon Asset Management, LLC	UK	146	300	Automotive Casting	Dual Use
Mar 2007	Talley Defense Systems, Inc.	Nammo AS	NO	100	62	Munitions	Defense
Mar 2007	Analex Corporation	QinetiQ Group plc	UK	173	141	SETA Services	Defense
Feb 2007	MILCOM Systems Corporation	VT Group plc	UK	42	100	C4ISR Systems	Defense
Nov 2006	Alcoa Aerospace Services	ThyssenKrupp Group	GE	100	100	Aerospace Manufacturing	Dual Use

Date	U.S. Company	European Buyer	Country	Price	Revenue	Business Area	Defense/ Dual Use
Oct 2006	Firearms Training Systems, Inc.	Meggitt plc	UK	144	79	Training Systems	Defense
Jun 2006	Englehard Corporation	BASF AG	GE	5,000	4,597	Environmental Control System	Dual Use
Jun 2006	Deutsch Engineered Connecting Devices	Wendel Investments SA	FR	1,040	500	Precision Fasteners	Dual Use
May 2006	MatrixOne, Inc.	Dassault Systemes SA	FR	410	124	PLM Software	Dual Use
Mar 2006	Midcoast Aviation	Jet Aviation Group	SW	125	125	Aviation Services	Dual Use
Oct 2005	BEI Technologies	Schneider Electric SA	FR	562	281	Electronic Sensors	Defense
Oct 2005	ABAQUS, Inc.	Dassault Systemes SA	FR	413	NA	Engineering Software	Dual Use
Sep 2005	Cytec Industries, Inc.	INEOS Group	UK	78	161	Specialty Chemicals	Defense
Jun 2005	United Defense Industries, Inc.	BAE Systems plc	UK	4,192	2,292	Ground Systems	Defense
May 2005	REMEC, Inc. Defense & Space	Cobham plc	UK	260	89	Advanced Microwave Systems	Defense
Apr 2005	The Cube Corporation	VT Group plc	UK	26	115	Facilities Management	Dual Use
Mar 2005	Johnson Controls Engine Electronics	Valeo SA	FR	431	556	Engine Control Systems	Dual Use
Mar 2005	Resource Consultants, Inc.	Serco Group plc	UK	215	256	IT Systems	Dual Use
Dec 2004	Westar Aerospace and Defense	QinetiQ Group plc	UK	130	140	Aerospace Systems	Defense
Nov 2004	Foster-Miller, Inc.	QinetiQ Group plc	UK	163	120	Advanced Technology	Defense
Jun 2004	TRAK Communications	Smiths Group plc	UK	112	71	RF Systems	Defense
Apr 2004	Kavlico Corporation	Schneider Electric SA	FR	195	156	Electronics	Dual Use
Apr 2004	Dynamic Gunver Technologies, Inc.	Smiths Group plc	UK	102	NA	Turbine Engine Components	Dual Use
May 2002	Wackenhut Corporation	Group 4 Falck A/S	DK	573	2,809	Private Security	Dual Use
Jan 2002	COMSAT Mobile Communications	Telenor A/S	NO	117	100	Mobile Communications	Dual Use
Jul 2001	Magellan Corporation	Thales SA	FR	79	114	GPS Applications	Dual Use
May 2001	Silicon Valley Group	ASM Lithography Holding NV	NE	1,590	474	Chip Manufacturing	Defense
Jan 2001	Boeing St. Louis Fabrication Facility	GKN plc	UK	64	300	Aerospace Manufacturing	Defense
Jan 2001	Lindberg Corporation	Bodycote International plc	UK	164	121	Materials Coating	Dual Use

Source: Defense Mergers and Acquisitions.

companies, while at the same time gaining technologies and production capabilities to supplement their domestic capabilities. Because many of these companies are dual-use, they also manage to avoid much of the scrutiny affecting the purchase of purely defense companies, including potentially complex reviews by the Committee on Foreign Investment in the United States (CFIUS), as fully discussed in Volume II, Chapter 14.

U.S. Acquisitions of European Defense Firms

In contrast to intensifying European acquisitions in the U.S. defense market in recent years, U.S. companies appear to have a less consistent and systematic approach to acquisitions in Europe. As shown in Figure 55, the number and value of U.S. acquisitions in Europe have varied markedly from year to year, with no consistent trend emerging. From a low figure of just one transaction worth \$200 million in 2001, acquisitions rose in 2002 and 2003, stabilized in 2004, then increased significantly in 2005. In 2006, the number of transactions increased from 8 to 10, but the value of those transactions fell from \$6.3 billion to just \$2.2 billion. Acquisition activity recovered in 2007, with 14 transactions worth \$8.9 billion, but in 2008 there were only four acquisitions worth just \$1.7 billion.

A certain symmetry can be seen here: British businesses accounted for the vast majority of U.S. acquisition targets, both in number (22) and value (\$19.6 billion). German businesses ranked second, with nine transactions worth \$2.9 billion, while France was third with six transactions worth \$1.3 billion; Italy was a close fourth, with two transactions worth \$1.2 billion. A breakout of U.S. acquisitions by country is shown in Figure 56. Details of acquisitions exceeding \$100 million are set forth in Table 21 (page 154).

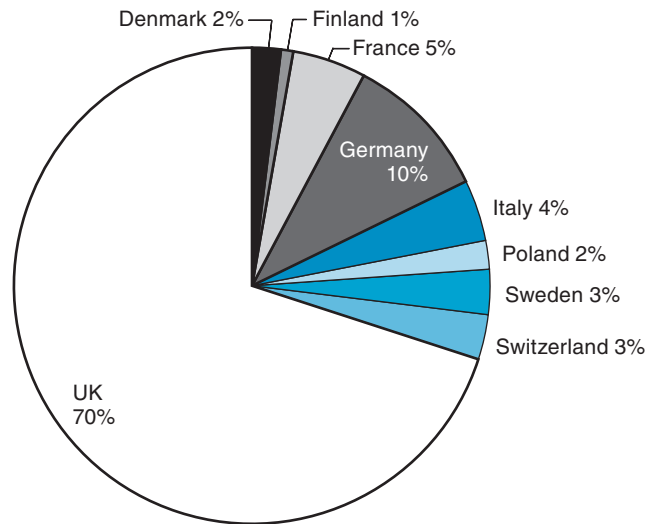
The data also reflects a number of other key points:

Most U.S. acquisitions in Europe do not involve true defense firms. Again, the Defense Mergers & Acquisitions database used for this analysis of U.S. acquisitions includes not only defense firms but also aerospace and homeland security firms, including IT firms and a range of other infrastructure firms. As shown on Table 21, most of the firms acquired by U.S. firms were not primarily focused on defense markets and had only modest to limited presence in defense markets. Indeed, other than General Electric's purchase of Smiths Aerospace in the UK for \$4.8 billion in 2007, there is no other significant U.S. purchase of a defense firm. The Smiths deal represented in part something of a "buyback" of defense capabilities, since Smiths had, over the previous decade, acquired a significant number of U.S. companies. Many of the larger purchases were in the homeland security field, where United Technologies purchasing the British companies Kidde plc, Chubb plc and Rentokil for \$2.8 billion, \$1.9 billion and \$1.2 billion, respectively, while Honeywell acquired a fourth British security company, Novar plc, for \$1.7 billion.

There are few acquisitions of prime contractors. It is significant that very few prime contractor companies were acquired by U.S. companies in this period, with most of these in distressed or over-capacity sectors. For instance, General Dynamics purchased the Spanish defense company Santa Barbara in 2001 for just \$6 million, and later acquired the Austrian light armored vehicle company Steyr-Daimler-Puch for \$200 million.

Most transactions involved subsystem and supplier firms that were dual-use in nature or involved inexpensive opportunities to buy into emerging markets. The

Figure 56 U.S. Acquisition of European Defense, Aerospace and Security Companies by Country



remaining acquisitions tend to mirror the pattern seen with European companies buying into the U.S. market: targeted acquisition of second- and third-tier subcontractors and suppliers, often with commercial or dual-use product lines.

Several U.S. companies acquired holdings in former Eastern European state-owned defense enterprises, such as PZL-Mielec Aircraft Company (bought by United Technologies for \$83 million). Many of these companies are not presently competitive, but represent potential low-cost production and service centers, and are a means of buying into an emerging market at a relatively low cost. Overall, then, the pattern that emerges is one of looking for targets of opportunity or specific growth market niches, rather than a systematic attempt to buy into the European market.

Interestingly, few of the U.S. firms making the acquisitions were mainstream defense firms. General Dynamics and L-3 Communications each made two acquisitions, and Lockheed Martin only one. All the remaining acquiring U.S. firms were dual-use businesses (e.g., United Technologies) or more commercially focused firms. Interestingly there were a few instances of U.S. financial buyers (e.g., Kohlberg, Kravis, and Roberts). This suggests several likely explanations:

Since large defense acquisitions were apparently off-limits in certain European countries due to restrictive foreign investment policies (as discussed in Chapter 3), the only acquisition targets available in much of Europe were by nature more dual-use and, therefore, of less interest to large U.S. defense firms;

- Many small and medium defense properties in Europe did not hold technology or sufficient ongoing programs generating cash flow to interest U.S. defense firms; and

Table 21 Key U.S. Acquisitions of European Defense/Aerospace/Security Companies in Millions of Dollars (\$)

Date	European Company	Country	U.S. Buyer	Price	Revenue	Comments	Defense/ Dual Use
Aug 2008	Bodycote Testing Group	UK	Clayton, Dubilier & Rice	765	NA	Materials Testing	Dual Use
Apr 2008	ULIS SA	FR	General Electric Company	100	65	IR Sensors; 15% stake	Dual Use
Apr 2008	Telelogic AB	SE	IBM Corporation	845	208	IT Systems	Dual Use
Feb 2008	Sonion A/S	DK	Technitrol, Inc.	410	200	Microacoustic transducers	Dual Use
Oct 2007	MGE UPS Systems	FR	Eaton Corp	612	245	Power Supplies	Dual Use
Oct 2007	Tyco Electronics Power Systems	GE	The Gores Group	100	NA	Power Supplies	Dual Use
Aug 2007	Cameca	FR	Ametek, Inc.	112	NA	Nanotechnology	Dual Use
Aug 2007	Arcotronics Italia SpA	IT	Kemet Corporation	24	207	Capacitors	Dual Use
Aug 2007	Marioff Corporation Oy	FL	UTC Fire and Security	316	126	Fire Suppression Systems	Dual Use
Jul 2007	Caledonian Alloys Group, Ltd.	UK	Precision Castparts Corp.	208	NA	Titanium Castings	Dual Use
Jul 2007	Rentokil Initial Electronic Security Gp	UK	United Technologies	1,160	580	Electronic Security	Dual Use
May 2007	Smiths Aerospace	UK	General Electric Company	4,800	2,400	Integrated Aircraft Systems	Defense
May 2007	McKethnie Aerospace	UK	JLL Partners	855	286	Aircraft Components	Defense
Apr 2007	BOC Gazy Sp z o.o.	PO	Air Products and Chemicals	503	172	Gas products	Dual Use
Apr 2007	Rectus AG	GE	Parker Hannifin Corporation	100	115	Aerospace Couplings	Dual Use
Mar 2007	Hirschmann Automation & Control GmbH	GE	Belden, Inc.	260	250	IT Networking Systems	Dual Use
Jan 2007	PZL-Mielec Aircraft Co., Ltd.	PO	United Technologies	83	NA	Helicopters	Defense
Nov 2006	Boehringer Group	GE	MAG Industrial Automation Systems	100	184	Machine Tools	Dual Use
Oct 2006	Filtronic plc Wireless Infrastructure	UK	Powerwave Technologies, Inc.	296	332	RF Products	Dual Use
Jul 2006	TRL Electronics plc	UK	L-3 Communications Corp.	171	40	RF and Satellite Systems	Dual Use
May 2006	Heinz Hanggi AG Stanztechnik	SW	The Barnes Grop	137	NA	Precision components	Dual Use
May 2006	Gardiner Group Europe	FR	Honeywell International, inc.	256	260	Security Systems	Dual Use
Apr 2006	Netcentrix SA	FR	Converse Technologies	164	50	VOIP Technology	Dual Use

Date	European Company	Country	U.S. Buyer	Price	Revenue	Comments	Defense/ Dual Use
Apr 2006	BAE Systems plc Aerostructures	UK	Spirit AeroSystems	204	367	Aircraft Structures	Defense
Mar 2006	Wallop Defense Systems Ltd	UK	Esterline Corporation	71	NA	IR Countermeasures	Defense
Mar 2006	First Technology plc	UK	Honeywell International	723	288	Sensors and Instruments	Defense
Jan 2006	SAM Electronics GmbH	GE	L-3 Communications Corp.	180	258	Maritime electronics	Dual Use
Dec 2005	Darchem Holdings, Ltd.	UK	Esterline Corporation	122	70	Thermal components	Dual Use
Dec 2005	SAFRAN SA Wire and Cable	FR	General Cable Corp	90	250	Electronic cables	Dual Use
Nov 2005	Cobham plc Fluid & Air Division	UK	Eaton Corporation	270	210	Aerospace systems	Dual Use
Nov 2005	Dominick Hunter Group plc	UK	Parker Hannifin Corporation	453	280	Filtration & Purification	Dual Use
Oct 2005	INSYS Group	UK	Lockheed Martin UK Holdings, Ltd.	180	47	Tactical Communications	Defense
Jun 2005	Zellweger Analytics	SW	Honeywell International, Inc.	150	170	Gas Detection Systems	Dual Use
Apr 2005	Kidde plc	UK	United Technologies	2,800	3,590	Security Systems	Dual Use
Mar 2005	Novar plc	UK	Honeywell International Corporation	2,300	2,700	Security Systems	Dual Use
Aug 2004	ESK Ceramics GmbH & co.	GE	Ceradyne, Inc.	142	90	Ceramic armor	Defense
Aug 2004	Babbie Group Ltd.	UK	Jacobs Engineering, Inc.	169	300	Facilities Management	Dual Use
Jul 2004	AZ Electronic Materials	SW	The Carlyle Group	413	NA	Circuit Boards, Chips	Dual Use
Jan 2004	MTU Aero Engines GmbH	GE	Kohlberg, Kravis Roberts & Co.	1,727	2,405	Aero Engines	Defense
Oct 2003	Steyr Daimler Puch Spezialfahrzeug AG	GE	General Dynamics	200	230	Armored Vehicles	Defense
Oct 2003	Fiat Avio SpA	IT	The Carlyle Group	1,216	1,740	Aircraft & Rocket Engines	Defense
Jul 2003	Chubb plc	UK	United Technologies	1,974	2,500	Security Systems	Dual Use
Mar 2003	Fairchild Dornier Corp 328 Jet Line	GE	AvCraft Aviation	108	NA	Transport Aircraft	Defense
Feb 2003	QinetiQ Group	UK	The Carlyle Group	265	NA	33.8% Equity Stake	Defense
Oct 2002	TRW Aeronautical Systems	UK	Goodrich Corporation	1,400	1,100	Aircraft Systems	Defense
Jan 2002	Invensys PLC Energy Storage Group	UK	EnerSys, Inc.	505	600	Batteries & Fuel Cells	Dual Use
Jul 2001	Empresa Nacional Santa Barbara	SP	General Dynamics	6	95	Armored Vehicles	Defense

- As discussed below, U.S. defense firms were more focused on the organic growth opportunities presented at home in light of the Bush defense budget buildup and ensuing wars in Iraq and Afghanistan.

Foreign Direct Investment: Conclusions

In sum, the data on U.S. acquisitions of European defense firms is consistent with the “market access” analysis of foreign investment policies in European countries. As discussed in Chapter 3, governments in France, Germany and Italy are largely not hospitable to such acquisitions while the UK was reasonably hospitable. The data largely tracks this analysis—showing that only 19 percent of U.S. acquisitions were in the three largest continental European countries studied despite the fact that these countries hold the bulk of Europe’s defense industrial capacity outside the UK. In contrast, consistent with its more open policies toward U.S. investment in the defense sector, the UK was the home of 70 percent of the U.S. acquisitions in recent years.

Transatlantic Defense Footprints: A Study in Contrast

Another key metric, closely related to foreign direct investment, is the degree to which European firms have developed defense industrial footprints in the United States and U.S. defense firms have developed defense industrial footprints in Europe.

As discussed below in detail, notwithstanding a relatively restrictive U.S. investment policy in recent years, leading European defense firms have all developed substantial U.S. positions through a combination of acquisitions (especially by UK firms), joint ventures and teaming arrangements, and the opening of their own green U.S. manufacturing operations. The “bull” defense market of the post-September 11 era has facilitated considerable organic growth by these European-owned U.S. defense businesses. In percentage terms, however, as discussed above, European defense firms still account for a relatively small, but growing, percentage of the U.S. defense budget.

In contrast, while U.S. defense firms have developed small, but growing, defense industrial capabilities in the UK, they have developed very little in the way of domestic footprints in other European nations—a function of limited market size, limited acquisition targets, and a lack of receptivity to U.S. investments in some countries.

Thus, today, U.S. firms own virtually no system-level capability in Europe outside their modest presence in the UK while European firms own significant subsystem capability in the United States and are beginning to acquire system-level capabilities in several cases.

The Emerging Picture

- European firms are achieving an increasing degree of market access through investment in the United States and subsequent organic growth generated by bringing their offerings to the U.S. market (usually through partnering with or sales to U.S. primes rather than directly to the DoD).
- U.S. firms are achieving their market access in Europe largely through direct bids to Defense Ministries and partnering with European firms rather than through direct investments.

Table 22 European Defense Company Presence in the United States

Company	Country	Description	Total U.S. Employees (2007)	U.S. Revenues (millions of dollars—\$)	Secure Facilities
BAE Systems plc	UK	Major prime contractor, developer and manufacturer of air, ground and naval systems	40,909	5,100	Yes
Finmeccanica (includes DRS)	IT	Does not include DRS. Broad range of military design, manufacturing and integration capabilities	13,000	4,300	Yes
Rolls Royce	UK	Major producer of jet engines	6,412	2,100	Yes
SAFRAN Group	FR	Jet and rocket engines, aerospace systems	1,750	1,500	No
Thales Group	FR	Defense electronics and communications	3,376	800	Yes
QinetiQ plc	UK	Defense research and development, robotics, armor systems	6,028	600	Yes
GKN plc	UK	Aircraft systems and components; 50% owner of Agusta Westland Helicopters	4,834	537	Yes
Meggitt plc	UK	Manufacturer of aerospace and EW Systems	4,141	482	Yes
Cobham plc	UK	Designer and manufacturer of aerospace and defense systems and components	4,567	383	Yes
EADS (excl. Airbus)	NE	Major European defense/aerospace company	800	350	Yes
Chemring (Kilgore)	UK	Military pyrotechnics, robotic vehicles, and system engineering	1,388	311	Yes
Serco	UK	Formerly Resource Consultants, Inc., a professional and technical services company	2,500	300	Yes
Amec	UK	Environmental remediation	1,219	300	Unknown
SAAB	SE	Training systems, camouflage and obscurant systems, spectral coatings	1000	150	Yes
Ultra Electronics	UK	Defense electronics, sonar, communications, and avionics	1,214	150	Yes
			93,138	17,363	

Sources: Company Data, DACIS Company Database, UK Ministry of Defense.

Growing European Defense Footprints in the United States

Today the leading European defense firms have substantial footprints in the United States. Appendix III sets forth detailed information drawn from interviews and publicly available data on the U.S. operations of each of these major European firms along with the strategies each has employed to grow their U.S. presence.

For each of these European firms, Table 22 identifies the fields of operation, revenues, employees of the U.S. operations of the leading European defense firms, and whether the firm owns a U.S. business with a facility clearance—which is necessary for it to participate in classified contracts. This “ticket to the dance” is critical to being a full participant in the U.S. market. As discussed in Volume II, Chapter 14, foreign defense firms are typically permitted to own U.S. businesses with facility clearances provided they put in place an appropriate industrial security arrangement with various protections in order to mitigate foreign ownership control and influence.

Significantly, as discussed in detail below, the available data shows the following:

- **The leading European defense firms have sizable and growing U.S. revenues and employees.** The revenues of the leading European firms from U.S. defense operations totals upwards of \$17.3 billion per annum. Virtually all of the leading defense firms have at least \$1 billion of U.S. revenues and more than 1,000 employees. Notwithstanding the relatively restrictive U.S. attitudes toward foreign investment in recent years (especially since the Dubai Ports case) (see Volume II, Chapter 14), the available data shows considerable growth of the U.S. footprints of European defense firms over the last decade and especially during the post-2001 defense “bull market.” In other words, those European companies that did buy into the U.S. market saw considerable organic growth within their U.S. subsidiaries.
- **UK firms have the largest presence of European defense firms.** Today, nearly all major UK defense firms have U.S. operating locations; many of them have numerous locations obtained over a series of acquisitions. Moreover, as shown on Table 23, UK defense firms have some 73,000 employees in the United States—by far the largest of any single country. BAE, of course, with 41,000 employees, dominates all other firms by virtue of its acquisitions of Lockheed Martin’s defense electronics business and United Defense Systems. The degree of UK presence reflects not only the “special relationship” but the fact that UK firms have been at this longer—beginning to build their presence in the United States during the 1990s as the consolidation proceed unfolded and the United States stood out as a substantial target of opportunity in a declining market. Thus, in the mid-1990s, Rolls-Royce, Smiths (now part of General Electric), and GEC-Marconi (now part of BAE Systems) began buying U.S. defense businesses.
- **European defense firms still account for a relatively small percent of U.S. defense spending.** With combined revenues of some \$17.3 billion, U.S.-based European companies still account for only 7 percent of DoD’s \$180 billion procurement and R&D budgets. Of that, BAE, with onshore revenues of \$5.1 billion, accounts for 2.8 percent.⁶⁹

⁶⁹ Some of the \$17.2 billion is in operations and maintenance (O&M) contracts and would be paid for out of the DoD’s \$170 billion O&M account. Hence, even a smaller percentage of the DoD’s R&D budgets would be allocated to foreign suppliers. In the O&M area, the percentages also would be very low.

Table 23 U.S. Revenues and Employment of UK Defense Companies

Company	2008 Revenue (millions of dollars – \$)	2008 Employment
BAE Systems plc	5,100	40,909
Rolls Royce	2,100	6,412
GKN	537	4,834
Cobham	383	4,567
Serco	300	2,500
Meggitt	482	4,141
QinetiQ Group	600	6,028
Amec	300	1,219
Chemring	311	1,388
Ultra Electronics	150	1,214
Total	10,263	73,212

- **Most leading European defense firms have cleared facilities.** Almost every leading European firm has at least one cleared facility with a security clearance and, hence, the ability to compete for classified awards. While there are a number of forms of mitigation agreements (proxies, special security agreements and the like) and different firms have different agreements in place, having one of them allows the relevant cleared facility to compete for certain classified contracts.
- **European defense firms deployed a range of strategies consistent with geopolitical realities.** The leading European defense firms used a combination of strategies to develop significant U.S. footprints: the acquisition of U.S. defense firms, collaborations of various types with U.S. defense firms (joint ventures, teaming arrangements, operating as co-primes), and the opening of greenfield manufacturing operations here (typically after program wins).
 - The larger U.K. firms have made significant U.S. acquisitions (including of prime level capabilities) in light of U.S. policies reflecting greater receptivity to such acquisitions—especially in the late Clinton Administration but during the Bush Administration as well.
 - Defense firms from other European countries, facing generally less receptivity during the Bush Administration, have tended to grow their own subsidiaries organically or, as discussed above, by making smaller, less sensitive and less splashy acquisitions (typically at the subsystem level).
- **The primary focus of the U.S. businesses owned by European defense firms is subsystems work.** Most of the foreign-owned U.S. defense firms operate U.S. businesses in the subsystem arena rather than in the systems level. However, this is changing—witness BAE Systems’ emerging role as a systems level supplier through its acquisition of United Defense and Armor Holdings and the program wins by EADS (utility helicopter) and Finmeccanica (Marine One Presidential helicopter).

U.S. Footprints in Europe: A Limited Presence

A Modest But Growing UK Presence

For a number of reasons—the relative size and scope of the UK market, the ability of U.S. firms to compete (i.e., the openness of the market) and the new UK defense industrial strategy encouraging an on-the-ground presence—the major U.S. defense firms have made conscious efforts to come onshore and develop and expand their UK footprint.

All of the “big 5” U.S. defense prime contractors now have a formal UK corporate structure and some degree of defense industrial presence as they acquire businesses and skills to provide the “bench strength” and meet work share requirements.

Briefly, the available data shows the following:

- **The leading U.S. defense companies all have some presence in the UK—with limited prime level capabilities, modest manufacturing capabilities and mostly subsystems work.** As shown on Table 24, their UK presence has grown considerably in recent years. The U.S. presence in the UK (Table 25) appears to far exceed the U.S. on the ground presence in the rest of Europe taken together, as discussed below. However, the market shares of U.S. firms in the UK is limited. As shown in Figure 137 in Chapter 13, Lockheed only has a 4 percent share of UK major program awards in 2006-2008 and other major U.S. firms have lesser shares.

Table 24 U.S. Footprint in the United Kingdom, 2003 vs. 2008⁷⁰ (Revenues are Millions of Dollars—\$)

Company	UK Employees 2003	UK Employees 2008	UK Revenues 2003	UK Revenues 2008
Lockheed Martin	1000	1700	329	667.5
Boeing*	425	600	2,400	900.0
Raytheon	1591	1400	431	420.0
EDS Corporation	2500	2500	255	300.0
General Dynamics	600	1600	111	450.0
Totals	6116	7800	3,525	2,737.5

Source: UK Ministry of Defense.

- **The UK footprints of U.S. defense firms remain modest** when compared to: 1) the presence of other leading European defense firms in the UK; and 2) the presence of UK defense firms in the United States. As shown on Table 26, the three

⁷⁰ Defense represents about 50 percent of Raytheon's UK revenues. Boeing revenues for 2003 include commercial products; revenues for 2008 are defense only. Only some 150-160 Boeing employees are working the defense sector. EDS revenues and employment for 2008 are from InfoBase Publishers' Defense/Aerospace Competitive Intelligence Service (DACIS) Companies Database. All other figures are from UK Ministry of Defense, Defense Procurement Agency.

leading European defense firms—Thales (which acquired Racal, a leading UK defense firm), Finmeccanica and EADS—have operations that considerably exceed the U.S. presence in size and scope of activities. Indeed, these three European firms alone account for roughly 33,000 employees—which is far more than the approximately 22,400 total presence of *all* known U.S. defense firms in the UK. And, the total 22,400 presence of U.S. defense firms in the UK in turn is less than one-third of the UK presence in the United States (i.e., nearly 73,000, as shown on Table 23).

- **By and large, the U.S. firms do not have significant system level capabilities in the UK.** Most of their activity is in the subsystem business.

Table 25 UK Employment of Major U.S. Defense Companies, 2007-2008

Company	UK Employees	Company	UK Employees	Company	UK Employees
GE Aviation	6,300	Esterline	1,300	JF Lehman	250
Goodrich	3,000	Honeywell	1,276	ITT	250
EDS	2,500	Northrop Grumman	700	Caterpillar	185
Raytheon	1,700	KBR	500	Boeing	160
Lockheed Martin	1,700	L-3 Communications	450	Teledyne	150
General Dynamics	1,540	Rockwell Collins	400	DRS	70
				Total	22,431

Table 26 UK Footprint of European Companies

Company	Country	2007 UK Revenues (Millions of Pounds—£)	2007 UK Employees
Thales UK	France	1,300	8,500
EADS	EUR	1,500	14,500
Finmeccanica	Italy	1,800	9,700

Source: UK Ministry of Defense.

A Very Limited Continental European Presence

In contrast, the U.S. presence in continental Europe is even further limited. As shown on Table 27, U.S. firms have little defense industrial capability; they own a relatively small number of firms, have little prime capacity and a small amount of subsystem business. Table 27 also reflects that the nature of a good portion of U.S. presence in Europe is dual-use (e.g., United Technologies and Honeywell.)

Most of the U.S. firms’ on-the-ground “presence” in Europe is in the nature of sales offices to directly market their products, very small facilities (repair, maintenance, etc.), and

the use of local commissioned sales agents in various countries. They also operate largely through collaborative arrangements of various kinds—partnerships, joint ventures and teaming arrangements—with local defense firms on programs. Also, as discussed above, U.S. firms offer considerable offsets to provide local participation.

The limited U.S. presence in continental Europe reflects a number of factors—limited market opportunities there, limited available acquisition targets, and limited receptivity to U.S. acquisitions by host governments.

Table 27 U.S. Defense Company Operating Divisions in Europe

Company	Subsidiary	Country	Description
Boeing	Boeing Research Technology Europe	Spain	First Boeing research center outside of U.S.; division of Boeing Phantom Works. Primary focus is environmental technologies, safety and human engineering.
Lockheed Martin	Optimus Lockheed Martin Information Technologies Group (OLM-ITG)	Poland	Provides advanced IT and integration services to government and commercial customers in Poland and Central Europe
Raytheon	Raytheon Marine GmbH High Seas Products	Germany	Manufactures gyro compasses, ring laser gyros and other shipboard navigation equipment
Northrop Grumman	Northrop Grumman Italia SpA	Italy	Formerly LITAL. Acquired by Northrop through Litton Industries. A leading provider of military navigation systems and C3I equipment
	Northrop Grumman Litef GmbH	Germany	Formerly LITEF GmbH. Acquired by Northrop through Litton Industries. Leading producer of military and space navigation systems.
	Northrop Grumman Sperry Marine GmbH	Germany	Formerly C. Plath GmbH; manufacturer of marine and military RF direction finding systems
	Park Air Systems	Norway	Acquired by Northrop in 2000-2001. Supplier of instrument landing and air traffic control systems
General Dynamics	General Dynamics European Land Systems	Austria	Created in 2003 as GD European Land Combat Systems to oversee GDLS' European subsidiaries. Subsidiaries shown below.
	Santa Barbara Sistemas SA	Spain	Acquired from Spanish government in 2001. Manufactures tanks, light vehicles, artillery, ordnance and small arms.
	Steyr-Daimler-Puch Specialfahrzeug	Austria	Acquired in 2003. Manufacturer of wheeled combat and tactical vehicles.
	MOWAG GmbH	Switzerland	Acquired in GD acquisition of GM Defense. Designer and manufacturer of wheeled combat vehicles

Company	Subsidiary	Country	Description
L-3 Communications	GD European Land Systems-Germany	Germany	Formerly part of Santa Barbara Sistemas, manufactures tactical bridges for military forces and amphibious vehicles
	Page Europea Srl	Italy	Systems engineering and integration company specializing in C3i systems
	EUROATLAS GmbH	Germany	Power systems and night vision devices
	L-3 ELAC Nautik GmbH	Germany	Formerly part of Allied Signal Underwater Systems. Sonar and underwater navigation systems
	L-3 Valmarine A/S	Norway	Formerly part of CAE Marine Controls Division. Marine Control Systems
United Technologies	Narda Safety and Test Solutions GmbH	Germany	R&D for electromagnetic field measurement systems
	European Pneumatic Component Overhaul and Repair SV	Netherland	Repair and overhaul of aircraft pneumatic components, esp. Europe, ME and Africa
	HT Hydraulic Technologies	Italy	Manufacturer of aerospace hydraulic systems
	Nord Micro Elektronik Feinmechanik AG	Germany	Electronic cooling and life equipment for spacecraft
	P&W Norway Engine Center	Norway	Overhaul facility for P&W jet engines
	P&W Belgium Engine Center	Belgium	Overhaul facility for P&W jet engines
	P&W Turkish Technic Aircraft Engine Maintenance Center	Turkey	Overhaul facility for P&W jet engines
	Ratier-Figeac	France	Aviation equipment and components
	Revima APU	France	Aircraft APU systems
	Shannon Aircraft Motor Works	Ireland	Rewind and repair of aircraft electrical systems
Honeywell	WSK PZL-Rzeszow SA	Poland	Manufacture, maintenance and repair of aircraft engines and helicopter dynamic systems
	Honeywell Aerospace GmbH	Germany	Manufactures APUs for Eurofighter, other aircraft systems, ground support equipment
	Honeywell GmbH Optoelectronics	Germany	Manufactures ring laser gyros, inertial measurement units and navigation systems
	Mora Aerospace as	Czech Rep	Manufacturer of aircraft engine components

Source: Infobase Publications, DACIS Companies Database.

As shown on Table 27, what limited U.S. *defense* presence exists is concentrated mainly in two companies: General Dynamics (mainly Land Systems), and Northrop Grumman.

- **General Dynamics.** Through a series of acquisitions, General Dynamics European Land Systems has developed a presence in the European ground armored vehicle market. Specifically, it now owns: the former Spanish national arms company Santa Barbara Sistema; the Austrian light armored vehicle company Steyr-Daimler-Puch; the Swiss light armored vehicle company MOWAG; and GD European Land Systems-Germany, a former Santa Barbara subsidiary producing combat engineering equipment. Hence, GD is really the only U.S. firm with any type of prime level capability in Europe.
- **Northrop Grumman.** Northrop Grumman, on the other hand, inherited a substantial presence in the European electronics and navigations subsystems market when it acquired Litton Industries. Its subsidiaries Northrop Grumman Italia, Northrop Grumman LITEF and Northrop Grumman Sperry Marine, are all major suppliers of marine and aviation navigation systems to a range of European prime contractors.
- **Boeing.** Despite being the second largest U.S. defense contractor and the world's leading manufacturer of commercial airliners, Boeing has a very thin presence in Europe, mainly taking the form of marketing/sales and customer service/technical support offices. In Spain, Boeing has established Boeing Research Technology Europe, the first Boeing research center outside of the United States. A subsidiary of Boeing Phantom Works, it focuses on environmental and airspace control solutions for both military and civil customers.
- **Lockheed Martin.** Outside the UK, Lockheed Martin has been a leader in penetrating the Central and Eastern European markets through its Optimus Lockheed Martin Information Technologies Group, providing IT and integration support for the Polish and other Eastern European governments, and providing a platform for Lockheed Martin business development activities in the region.
- **Raytheon Systems Limited (UK subsidiary).** Raytheon's main overseas production unit in continental Europe is Raytheon Marine GmbH High Seas Products of Germany, a leading manufacturer of gyro compasses, ring laser gyros, and marine navigation systems.

Footprints: Conclusions

In sum, the footprints of U.S. firms in Europe and European firms in the United States track well with the market access analysis in Chapter 3. Among European firms, the UK defense firms have the largest U.S. presence—consistent with our special relationship, longstanding defense industrial collaboration, and a greater degree of U.S. openness to UK ownership of U.S. defense assets. Other European firms, faced with a less favorable climate for acquisitions, have more modest but growing U.S. capabilities acquired through smaller, less sensitive acquisitions and other approaches. In contrast, U.S. firms have a larger but still modest presence in the UK than do continental European firms—reflecting both different market opportunities and different foreign investment policies.

Coping Strategies of Defense Firms

The analysis above also shows that European and U.S. defense firms have developed coping strategies to deal with the defense market realities they face—both the opportunities and the impediments.

European Multidomestic Strategies

European defense firms have recognized the small and relatively stagnant size of their home markets, and the need to diversify their customer base in order to sustain a viable business with economies of scale. As noted above, most of the larger European defense firms obtain only a relatively small percentage of their revenues from their home markets today.

In light of these circumstances, the strategy that most of the large European defense firms have executed is to develop multiple home markets where they can (hence, the term “multidomestic” firm) and to sell into other markets, forming partnerships with local firms (such as in Eastern Europe). BAE Systems considers the UK, the United States, Australia and Saudi Arabia as its home markets; Thales is at home in France, the UK, the United States and to a lesser extent some other nations; EADS is in France, Germany, Spain and the UK; and Finmeccanica in Italy, the UK and the United States.

The available data reflects these strategies to some extent. For example, in the UK, Finmeccanica and EADS/Airbus respectively have an 8 and 6 percent share respectively of major defense contracts awarded in 2006-2008, as shown on Figure 137 in Chapter 13.

Not surprisingly, European firms view the large U.S. defense market—despite its accessibility issues—as a lucrative potential opportunity and thus have all acted to expand their presence there, as discussed above. Faced with flat or declining domestic sales and strong export competition in third markets from the United States, Russia, and Israel, penetrating the United States is a rational move.

The multicountry domestic strategy is in part an effort to ease security of supply concerns of their major customers. By “buying into” a market and maintaining substantial domestic presence, foreign suppliers create more comfort on the part of their host government customers. Having key programs managed by foreign-owned but domestic firms limits program risk and addresses concerns of customers that desire to spend their funds at home. The fact of substantial local presence, as distinct from a foreign firm that merely sells into the country, also gives the customers more leverage—a foreign firm with a sizable domestic presence is unlikely to shut a key capability without the acquiescence of the government customer. With their domestic presence, these firms are better equipped to reach into the U.S. national, state, and DoD cultures and structures and feel they can become viewed as “good citizens,” thereby gaining the public confidence and win more awards.

European firms that do not have a manufacturing footprint in the United States generally collaborate with a U.S. firm (through a joint venture, licensing arrangement, co-production or the like). However, experience has taught that such collaborative arrangements pose a variety of commercial challenges and can limit the revenues the firm can realize from sales to the U.S. military.

U.S. Firms: Operating Through Direct Sales and Partners

In contrast, U.S. firms face a different opportunity set and environment that has driven them to much less presence in Europe. First, most fundamentally, in the post-September 11 era, U.S. defense firms have seen a target-rich environment at home—with significant spending on wartime priorities and new capabilities—and have largely focused their efforts at home. Indeed, with a large market at home, expanding abroad in Europe has been less of a necessity. As noted above, most large U.S. defense firms only derive 20–30 percent or less of their revenue from foreign sales, let alone European sales.

There is little doubt that geopolitics and market opportunities are key drivers of their strategy. For example, in the late Clinton years, with U.S. defense budgets still showing limited growth, most of the large U.S. firms were contemplating various types of investments and alliances in Europe. Subsequently, as the market changed in the United States during the Bush Administration, large U.S. firms that had been exploring broader linkages in Europe largely pulled back those efforts.

Thus, in the context of a target-rich opportunity set at home, U.S. firms viewed the proposition abroad as far less appealing: limited demand in Europe (small programs), long lead times for program fruition, and the prospect of fixed-price development in some instances (especially in the UK). Moreover, as noted above, they have faced a less than hospitable environment for U.S. ownership of leading defense firms in most of the large continental European countries. And, consummating European deals can take significant investments of time and effort.

Also, U.S. firms view the operating environment in Europe as difficult—with relatively inflexible work rules, complex regulations, and the like. The cumulative effect is to make Europe a rather unpromising investment environment for U.S. defense companies focused on enhancing shareholder value.

In short, with all of the challenges involved in making an acquisition and only select pockets of interesting technology, U.S. defense firms understandably make limited and very targeted acquisitions and keep costly presence in Europe limited.

At the same time, U.S. firms also recognize that in a number of areas they have better developed capabilities—the better widget—and may be able to sell that system with or without domestic presence. Hence, a strategy used by some U.S. firms is to focus on “low hanging” fruit, pursuing only the most likely opportunities in a difficult environment with low potential rewards.

As U.S. defense budgets tighten in the years ahead, U.S. firms may see more value in European alliances and linkages (and be more willing to take the risks associated with expanding operations in Europe). In the short-to-medium term, however, it is not likely that we will see a wholesale increase in the size and scope of the U.S. defense industrial “footprint” in Europe.

Toward Globalized Defense Firms: The Difficulty in Achieving Synergies Across Multicountry Operations.

This footprint review and related analysis shows that today most defense firms with foreign operations are not operating as truly globalized firms—i.e., with the capability to

mobilize capital, people and technology and with the flexibility to move these resources across national boundaries to ensure their most efficient use. In fact, the “multidomestic model” in vogue is more limited in nature. A combination of export controls, industrial security, security of supply and political considerations have resulted in a situation where it is more difficult to obtain cross-border synergies in these firms. With special industrial security arrangements in place to mitigate “foreign ownership control and influence” in place, for example, U.S.-owned foreign defense firms are largely operated separately from their foreign parents—with far less movement of technology and people than in truly globalized firms.

Even within Europe, the large firms today are mostly operated on a national basis as well—with a collection of national programs and capabilities. The only firm in Europe that comes close to the more “globalized” model utilized in the commercial world is MBDA, according to market participants. MBDA is unique because it was formed from multiple cooperative joint ventures to pursue tactical missile programs that were too complex and expensive for any one company to develop on its own. Originally consisting of Matra and BAE Dynamics, MBDA later absorbed other national companies, including Germany’s LFK and Italy’s Alenia Marconi Missile Systems. Operating as a fairly loose consortium of nationally based subsidiaries, MBDA shares its technology base and key personnel while acting essentially as a multidomestic company for manufacturing and work share purposes.

Hence, the question for the future is whether multinational defense firms can be allowed to operate with more flexibility across boundaries in a set of allied countries—with the economic efficiencies this can produce—while continuing to meet national security requirements in the United States and elsewhere.

Chapter 5

The Role of the European Union and Other “European” Arrangements in Defense Markets: Realities, Prospects and Implications

The assessment of specific European national defense markets in Chapters 3 and 4 highlights a gradual shift within Europe away from national, mainly sole source buying to “better value buying” and more “European-centric” conduct—with both European armaments buying (usually by ad hoc groups of nations) and European defense supplier consolidation driven by fundamental political and economic dynamics.

This chapter reviews the evolving role of *European*, as distinct from *national*, entities and arrangements in defense markets and their implications for the United States. This evaluation uses the specific metrics set forth in Chapter 2 both to assess defense market realities today and the trajectory likely in the next 5 to 15 years.

As discussed below, a number of European actions have been taken over recent years to facilitate this development and put in place the “hardwiring” for a single European defense market. Specifically, of most note:

- The six leading European defense supplier nations have put in place a series of legal arrangements—the “Letter of Intent” (LOI) and related agreements—designed to facilitate intra-European supplier consolidation and encourage better and less duplicative buying habits.
- The European Union (EU) has made significant efforts to develop institutional capabilities and shape rules related to the demand side of defense markets (i.e., on defense procurement and export licensing).

I. The Emergence of a European Defense Identity—The Context for a European Defense Market

The likely evolution of the European defense market must be assessed in the context of the overall role of the EU, in collective security and the degree to which the EU, as a distinct entity, is coming together in defense. As a baseline, this section sets forth our assumptions about the realities and likely trajectory of efforts by European nations to forge a collective, as distinct from purely national, defense identity.⁷¹

Since the end of the Cold War, Europe has grappled with whether and how to take a more significant leadership role in its own defense. After the failure to establish a European Defense Community in the 1950s, a series of subsequent efforts were undertaken to create European-wide institutional defense structures—most notably the Western European Union (WEU); all of these suffered from a limited membership, weak command and control structures, and reliance on North Atlantic Treaty Organization (NATO) in any event for operational support.⁷²

⁷¹ The baseline analysis of this section draws heavily from J. Bialos, S. Koehl, D. Catarious, and S. Spaulding, *Ideas for America's Future—Core Elements of a New National Security Strategy*, Chap. 16 (pp. 415-459) (Center for Transatlantic Relations, Johns Hopkins University's Paul Nitze School of Advanced International Studies, June 2008).

⁷² For more on these developments, see M. Trybus, *European Union Law and Defence Integration* (Hart: Oxford 2005), Chap. 1.

Over time, as the European Union has developed and matured, it has not surprisingly taken increasing steps to focus on foreign and defense policy. Specifically, the EU Common Foreign and Security Policy (CFSP) was established as the second of the three pillars of the European Union in the Maastricht Treaty of 1992, and was further defined and broadened in the Amsterdam Treaty of 1999.

In the late 1990s, through a series of EU summit meetings, leading EU Member States also shaped the European Security and Defense Policy (ESDP) as an element of the CFSP. This fundamentally new approach called for the substantial engagement of the EU in security and defense matters, and most notably the establishment of autonomous EU military capabilities. The ESDP is a gradual evolution of EU member nations into a shared defense identity resulting from nearly 15 years of various initiatives by European nations at the bilateral and multilateral levels and at the EU.

Consistent with overall trends toward European integration, Europe is gradually coming together in defense and security—areas at the heart of national sovereignty. The EU has aspirations to play a more global role in security matters commensurate with its size and economic and political prowess.

To execute this agenda, the EU is gradually coalescing a defense identity in all of its facets and is likely to become, over time, a real player in defense—with a particular focus on low intensity missions (so-called Petersburg tasks), homeland security and space. The EU's activities and operations are developing gradually, with fits and starts as well as setbacks, but will move forward—driven by a series of powerful geopolitical, economic and social dynamics.

For better or worse, the EU is becoming the center of gravity for European civil and military activities in homeland security, stabilization and reconstruction, peacekeeping, space (civil and military) and low intensity war fighting. As the overall integration of Europe moves forward, a maturing Europe is increasingly likely to gradually take on the external and internal security roles of its members as well. Indeed, it is inherent in the evolving nature of the EU—almost genetic—that Europe will develop a serious defense identity.

A. ESDP: Connecting the Dots

Since the creation of ESDP in the late 1990s, the EU has developed many of the nascent elements of a defense and security identity—the core aspects of what nations do in shaping a security policy.⁷³ Specifically, the EU has put the following core strategic, institutional and policy elements in place:

- **A European Security Strategy and Role.** In 2003, the Council of the European Union (EU Council) adopted “A Secure Europe in a Better World,”⁷⁴ the first Euro-

⁷³ J. Bialos and S. Koehl, *Supra*, pp. 420–421.

⁷⁴ European Security Strategy, Brussels, Dec. 12, 2003. Available at: <http://www.consilium.europa.eu/uedocs/cmsUpload/78367.pdf>.

pean joint security strategy and a counterpart to The National Security Strategy of the United States of America. The Strategy reaffirmed the EU’s commitment to having autonomous capabilities to undertake, under EU auspices, so-called “Petersburg tasks” (first adopted in the Petersburg Declaration of June 1992 by the WEU), which include: humanitarian and rescue tasks, peacekeeping, and the use of combat forces in crisis management, including peacekeeping.

- **Military and Civilian Force Requirements.** Consistent with its overall Strategy, the EU has established a series of so-called “Headline Goals” that call for the creation of a European catalogue of military and civilian forces capable of carrying out the Petersburg tasks.
 - Headline Goal 2010 establishes EU expeditionary battle groups and expands the mission set to include disarmament, conflict prevention, and post conflict stabilization.
 - Civilian Headline Goal 2008 establishes the need for a complementary set of integrated civilian capabilities for crisis management (advice, training, and monitoring missions designed to strengthen local institutions).
- **EU Organizational Structure and Leadership.** Under the auspices of the EU Council (an intergovernmental body), a number of new structures have been put in place that establish rudimentary elements of a European national security apparatus—similar to those of national governments and NATO. Specifically, the following structures are now in place:
 - **Security Leadership.** The position of High Representative of the CFSP, currently held by Javier Solana, is responsible for preparing and examining decisions to be made before they are brought to the EU Council for consideration.
 - **Policy and Military Staffs.** New political and military bodies and structures have been established in the EU Council to provide political guidance and strategic direction to EU operations. These include an EU Political and Security Committee composed of national representatives, an EU Military Committee composed of European Chiefs of Defense to advise on conflict prevention and crisis management tasks, and an EU Military Staff (in effect, a standing staff) that will provide military advice and make recommendations. Since 2004, the Military Staff has been assisted by a military/civilian cell, which performs tasks such as strategic planning with respect to possible integrated civil/military operations in response to crises.
 - **Command Structure: The EU Operations Centre.** An EU Operations Centre was established (within the EU Military Staff) with the capability to command missions and operations of limited size.
 - **The European Defense Agency (EDA).** As discussed in detail below, the EDA was established on an accelerated basis in 2004, with a mission to improve European defense capabilities in the field of crisis management and to sustain and develop ESDP. The EDA’s tasks include: improving the EU’s defense capabilities in the field of crisis management; promoting European armaments cooperation; strengthening the European defense industrial and technological base and creating a competitive European defense equipment market; and promoting research

and development (R&D) with a view toward strengthening Europe's industrial and technological potential in defense.

- **Capabilities Planning.** The EU established the European Capability Action Plan, now led by EDA, to translate its vision and force goals into needed capabilities. The EDA is focused on identifying capability needs to match the EU's operational vision and force requirements, identifying what is lacking in EU capabilities (shortfalls) to meet those needs, and what are the range of possible solutions.
- **EU Operations.** Notably, since 2003, the EU has deployed a range of military and civilian expeditionary capabilities (usually small in number) for nearly 20 missions (mostly with the framework of the Petersburg tasks). At this writing, there are in the range of 15 active EU missions.⁷⁵ Quite a number of these missions involved the use of NATO's chain of command or its strategic assets (lift, C4ISR, etc.). Thus, the EU is beginning, on a small scale, to flex its civil/military low intensity capability and emerge as a separate actor on the global stage.
- **Joint Training and Exercises.** The EU also has established a joint training policy with civilian and military dimension, and has conducted numerous training sessions in support of ESDP in order to test and validate the readiness of its crisis response capabilities.⁷⁶ These activities are being undertaken under the auspices of the European Security and Defence College, essentially a network of institutes, colleges and national institutions that provide and coordinate relevant ESDP training.
- **European Defense Marketplace.** In support of developing "best value" European defense capabilities (both affordable and innovative), the European Commission (EC) and the European Parliament have taken a historic step forward by proposing and passing new, legally binding Directives on defense procurement and internal transfers (export licensing). As discussed in detail below, the basic thrust of these Directives is to facilitate the creation of a single European defense market subject to open and competitive procurement where possible, and to restrict the ability of Member States to "opt out" of these disciplines and continue national, sole source buying practices of the past. These Directives are now in a final form, with the European Parliament having accepted a "compromise" version of the texts (amended to reflect input from European governments and constituencies) in late December 2008 and early January 2009. Final approval by Foreign Ministers is expected in late 2009, and the consensus view in Brussels and leading European capitals is that these Directives, which have the force and effect of law, will be implemented.
- **EU Space Activities.** The EU has developed a "European Space Policy" closely integrated with ESDP.⁷⁷ It recognizes the role that space-based assets can have in crisis detection, prevention and management, and calls for EU access to existing and planned military systems of Member States in order to ensure availability of

⁷⁵ See Speech to the Paris Press Club, U.S. Ambassador Victoria Nuland, Feb. 22, 2008. ("Nuland Speech"). Available at: <http://www.america.gov/st/texttrans-english/2008/February/20080222183349eafas0.5647394.html>.

⁷⁶ See "Presidency Report on ESDP," European Union, June 18, 2007, Brussels, p. 28. Available at: <http://register.consilium.europa.eu/pdf/en/07/st10/st10910.en07.pdf>.

⁷⁷ "European Space Policy: "ESDP and Space," Council of the European Union, Nov. 16, 2004. (11616/3/04) Available at: http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/st11616/_st11616_en.pdf.

these assets in a crisis. It also includes a sizable space R&D program (totaling more than \$5.5 billion).

- **New EU Civil Security Program.** Related to ESDP, the EC Directorate General Enterprise and Industry is leading an EU civil (“homeland”) security program. This effort, complementary to defense capabilities, is clearly a model for an EU centered strategy—with the EU taking leadership in coordinating requirements and funding programs at the EU level. In April 2005, the EU established the European Security Research Advisory Board to draw the strategic lines for European security research and set up principles and mechanisms for its implementation within the EC’s seventh framework program for research and technology (R&T). The EU’s focus includes not only meeting European society’s needs through the definition of customer (end-user) needs but raising the global competitiveness of the European technology supply chain. This research program has grown markedly from about \$40M/year in 2005 and in 2006 to nearly \$200M for 44 projects in 2007.⁷⁸ The EU plans to spend €1.4 B (about \$1.75-2B) in security research over 7 years—clearly a significant coordinated Europe-wide program.

B. Will Europe Come Together in Defense?

In sum, it is difficult to review all the diverse elements of ESDP without concluding that Europe has put in place, in nascent form, most of the elements national governments associate with security and defense—organizational structure, strategy, force requirements, capabilities planning, and operations. And, ESDP has not to date withered or been abandoned like its predecessors. Rather it has gathered steam—it has moved from pure paper concept to organic form.

The question is what to expect in the future? In considering the future trajectory of ESDP, there often is a “glass half full, glass half empty” quality to the discussion. Euroskeptics—including people both in and outside the EU—can readily point to factors suggesting ESDP and the Headline Goals will have little traction and will not be meaningful five, ten or twenty years hence. Generally, they point out that the elements of security strategy and organization developed are “all process and little results.” They point to the different attitudes of Member States toward ESDP, the overriding national nature of defense requirements and budgets, and the lack of real shared resources and programs.

More specifically, the following considerations point toward ESDP being of limited relevance:

- Despite increasing European calls for cooperation and acting together, there continues to be resistance among European nations to transferring to the EU security related functions, which touch on core elements of sovereignty.⁷⁹
- ESDP remains inherently intergovernmental in nature (requiring consensus of all EU governments for action). The High Representative coordinates policy and plays a significant role, but has no executive authority in a classic sense (or comparable to the authority of EU Commissioners) and is not the empowered representative of the EU (along the lines of a Foreign Minister). Indeed, the new EU Treaty of

⁷⁸ See EC DG Enterprise and Industry website, Security Research. Available at: <http://ec.europa.eu/enterprise/>.

⁷⁹ For European views on the disconnect between European aspirations and national sovereignty considerations, see The Venusberg Group, “Beyond 2010: European Grand Strategy in a Global Age,” Bertelsmann Stiftung, July 2007, p. 15.

Lisbon, which follows on from the rejected Constitutional Treaty, expressly walks back from the idea of creating an EU Foreign Minister.⁸⁰

- Europe has continuously failed to meet its Headline Goal capability commitments (causing the EU to extend its deadlines and scale back its ambitions). In the current political climate, Member States' national defense budgets are unlikely to increase due to the lack of support for such a move amongst voters.
- The EU has a very limited budget for security—EDA's total research budget is in the range of €25 million (about \$39 million). To date, there is very limited pooling of European R&D resources through EDA.
- The EDA is small in size and has limited authority—it is not procuring or developing major defense systems.

On the other hand, there are a number of tangible vectors pointing in the other direction (i.e., that the EU will have a serious role in security matters and ESDP will be central):

- The attitudes of numerous Member States, including the United Kingdom (UK), have grown more favorable (or at least less skeptical) toward ESDP;
- The speed with which the EU has established ESDP and related EU entities and arrangements (such as EDA) as well as strategies is remarkable for an intergovernmental organization and reflects a strong European commitment to the effort;
- The fact that EDA is now engaged in coordinating actual R&D programs and is seeking to encourage and facilitate others;
- Support for an increased role of the EU in security and defense matters amongst voters across the EU.⁸¹ According to Eurobarometer, for example, in 2004, 78 percent of European voters were in favor of a common *defense* and security policy and 69 percent in favor of a common *foreign* and security policy; and
- The relative speed with which the EU has moved to approve its new Directives on the defense market.

Powerful, Sustained Dynamics Favor an Increasingly Robust ESDP

Yet, in a certain sense, this type of static analysis of current ESDP related policy outputs and processes—based on what exists today—is really too limited in nature and misses the bigger picture. *A more holistic and long-term view of the powerful dynamics at work indicates that ESDP is here to stay and is likely to gain increasing traction in the future. Fundamentally, a series*

⁸⁰ In the context of the European Union, “supranational governance” is characterized by limited control of the Member States and a stronger role of independent institutions. The independent European Commission has the almost exclusive right to initiate new legislation, the directly elected European Parliament votes on the legislation together with the Council, the Council decides by qualified majority voting rather than by unanimity, and there is judicial review through the European Court of Justice (the “supreme court” of the EU). The internal market and most other policies of the European Commission are conducted on the basis of this supranational model. Understandably, there is reluctance to subject national security and armaments to this supranational form of governance. In contrast, the term “inter-governmental” describes a form of governance whereby the Member States retain almost full control over decision-making through the requirement of unanimity, which gives them effectively a veto power. The Council—in which the Member States are represented—is the only decision-maker here. The roles of other institutions, European Parliament, Commission, and European Court of Justice, have been to date very limited. The Common Foreign and Security Policy described here and throughout this paper is inter-governmental in character.

⁸¹ Eurobarometer 2004, Brussels, Dec. 10, 2004, IP/04/1460. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/04/1460>.

of broad and sustained societal dynamics—geopolitical, economic and industrial—appear to be converging in favor of continued European integration and a robust and meaningful ESDP.

What are these drivers of ESDP? These powerful dynamics include a series of impulses, which are interrelated and often hard to untangle. Indeed, not surprisingly, the views of European government and core constituencies vary about which of these drivers are more important than others. They include:

- *Increasing European integration* and the corresponding authority of the EU over European affairs, including the daily lives of its citizens;
- *The growing global economic and political reach of the EU* and the natural extension of its reach to the defense arena;
- *The desire to have a strong autonomous European foreign and defense policy* independent of the United States; and
- *The economics of defense in Europe*, with the combination of constrained budgets, relatively low levels of demand and rising costs of weapons systems.

European Integration. First, and foremost, the ongoing integration of Europe is the major driver of ESDP. Despite challenges, and fits and starts (witness the failure in voting for the EU Constitution and the recent rejection by Ireland of the Treaty of Lisbon—the “reform treaty”), the reality and trend lines are clear. Simply put, Europe is becoming truly “European.” The process of European integration has moved forward and appears to be picking up considerable steam (especially when viewed on a 10- to 15-year horizon). The trend lines are clear and in largely one direction: the creation of a more “European” Europe in terms of governance that can be viewed across the spectrum of evolving institutions and laws, policies and practices.

Indeed, viewed against the metric of how other international organizations have evolved, the EU’s dynamism and pace of change is nothing short of remarkable. Viewed through the lens of a 27 state membership organization that largely operates by consensus, in fact the progress has been relatively rapid and robust. *It is difficult to see any major factors on the horizon that will halt or impede this trend in the near-to-mid term.*

Consistent with this integration, the EU has increasingly taken authority over a wide range of matters affecting Europeans’ daily lives. Its institutions include executive, judicial, and legislative bodies. Although Member States may not want to view it in such terms, the reality is that there has been and will likely continue to be a considerable but gradual cessation of national sovereignty to European institutions. In effect, an increasingly integrated Europe is developing a maturing set of governmental institutions—legislative, executive and judicial—that are increasingly taking on the roles of statehood. It is not hard to imagine a Europe 10-20 years from now where European laws, rules and policies are more important than national laws, rules and policies—with Europe over time essentially becoming a single federated state.⁸²

Not surprisingly, given the close relationship of national security and defense to sovereignty, these subjects have been among the last areas to be brought within the EU (and were

⁸² In some ways this is already true. Two-thirds of the legislative activity of Member State national Parliaments today consists of implementing EU Directives into their national laws.

purposefully left out of initial EU formative bodies and structures).⁸³ But consistent with increasing integration, it is a natural evolution of European society that Europe, as Europe, would seek to have greater control over its own security policy.

Europe's Growing Global Role. Europe, as Europe, is also gradually becoming a global power to be reckoned with as well. With its large size and vibrant and large economy, and leading role in trade and investment globally, Europe as Europe is playing more and more of a role on the world scene. Today, the EU generates an estimated 30 percent share of the world's nominal gross domestic product (approximately \$16.6 trillion in 2007) and is the world's largest economy as well as its largest exporter of goods.⁸⁴

Toward an Autonomous European Policy (and a Counterbalance to the United States). More specifically, ESDP is in good measure a reaction to Europe's inability to deal with the Balkan crisis in the 1990s, and its forced reliance on NATO and the United States to address the most significant post-Cold War regional crisis.⁸⁵ Europe's failure in the Balkans reinforced broader European anxieties over Europe's relative lack of a significant international leadership role in foreign policy and defense—what some have viewed as its “overdependence” on the United States.

Indeed, some in Europe believed the time had come for “a rebalancing of the relationship... and for concrete steps to be taken by the European member countries to assume greater responsibility for their common security and defense.”⁸⁶ The French government, a leader in the drive to create and strengthen ESDP, has been particularly open in its drive for a more independent and assertive European foreign and defense policy that can act freely of the United States. Its recent White Paper reconfirms this policy goal.⁸⁷

The Economic Drivers of ESDP. Finally, the economics of European defense has become a major driver of a more integrated approach to defense and security. The limited

⁸³ The March 25, 1957 “Treaty Establishing the European Economic Community” (the predecessor to what is now called the European Community Treaty), one of the two treaties called “the Treaty of Rome,” did not cover national security or defense matters. Article 296 (in its current version amended by the 2000 Treaty of Nice, “Amending the Treaty on EU, the Treaties Establishing the ECC, and Related Acts”), allows Member States to withdraw from the treaty rules if their national security is implicated. Specifically, it states in relevant part that “any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the common market regarding products which are not intended for specifically military purposes....” See also Article 297 EC Treaty (containing a similar derogation for national security situations, such as war or internal disturbances). The background of this provision is that a few years before, in 1954, a Treaty establishing a European Defense Community which would have created integrated European armed forces and generally a common defense policy (within NATO), had failed because of sovereignty concerns, notably in France. Hence the EEC Treaty had to exclude defense from its scope in order to be accepted. See: M. Trybus, “The EC Treaty as an instrument of European defence integration: judicial scrutiny of defence and security exceptions” (2002) 39, *Common Market Law Review*, pp. 1347-1372.

⁸⁴ The World Bank, Data and Statistics Database: GDP and GNI. Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20394802~isCURL:Y~menuPK:1192714~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>.

⁸⁵ J. Bialos and S. Koehl, *Supra*, p. 421.

⁸⁶ NATO Handbook, Chap. 4, “The European Security and Defence Identity (ESDI),” “Evolution of the ESDI,” p. 2. Available at: <http://www.nato.int/docu/handbook/2001/hb0401.htm>.

⁸⁷ “New French White Paper on Defence and National Security,” June 17, 2008, *Presidence de la Republique Francaise* (English language summary). Available at: http://www.ambafrance-uk.org/New-French-White-Paper-on-defence.html?var_recherche=sarkozy%20speech%20livre%20blanc%20defense. The Livre Blanc may also be found in its full French text as well as in the English summary form at: http://www.premier-ministre.gouv.fr/information/les_dossiers_actualites_19/livre_blanc_sur_defense_875/.

defense budgets of European nations, the rising costs of weapons systems, and the national fiscal limitations are creating powerful impulses for the Europeanization of national defense efforts in Europe.

As discussed in depth in Volume II, even today, most European nations (including the UK) still buy large percentages of their military equipment and services from national defense firms or champions on a sole source basis. To be sure these national acquisition strategies are changing and becoming more European in their focus, as previously discussed. However, change in this area is slow, and is constrained by a national focus on jobs and the economy, protectionism, and a deep-seated and hard-to-change fear of "dependence" on even other European country suppliers.

For the future, however, the reality is that even the larger European nations cannot sustain either national defense industrial champions or national buying. Their budget constraints, the relatively low level of national demand for systems (aircraft, ships, ground vehicles), and the rising cost of armaments is forcing a realization that this cocoon-like national approach must end and encouraging pragmatism about choices. There is increased recognition that acting alone may mean ceding certain highly sophisticated military, technology and industrial capability to the United States.

Thus, not surprisingly, attitudes in Europe on this are changing and are driving different behaviors even among the most protectionist countries. As Volume II of this study shows, there has been some movement away from national buying and toward more open (and especially European) procurement (even in traditionally protected markets), consolidation of the European aerospace and defense industry, and a move toward cooperative procurement. Inevitably, these powerful economic incentives will reinforce and support other impulses in favor of a European defense identity. Indeed, even in the absence of conscious concerted actions by European governments to advance ESDP, economics will drive the agenda forward.

In sum, a review of ESDP in its totality leads to the conclusion—which we accept as a baseline for this study—that as European integration moves forward and the EU becomes more supranational in nature, ESDP will be a sustained and increasingly important element of European policy. The "nascent" elements of ESDP today are likely to develop and mature, and be better funded, as European nations gradually recognize the power of collective action, as economic realities hit home, and as national defense and security apparatus' begin to gradually wither (especially in the smaller nations where economics will foster this movement). The only question is the speed and scope of ESDP's evolution—which European governments' collective actions will shape.

To be sure, Europe today, is not a super power in security terms with the ability to project significant force abroad. But the question is largely not one of whether Europe will develop a credible defense capability (and transform its rhetoric and structures into capabilities and action). The question is more one of timing and effectiveness—how soon it will take place and how meaningful the capability will be.

II. Moving Toward an EU Defense Market: Putting the Hardwiring in Place

An integrated European defense market has been a goal among some in Europe for more than two decades as well. Various efforts have been made and the concept has gradually gained traction.

The objective of a more “European defense demand” (with a more open internal market) and a consolidated European industrial base reflects a number of interests and impulses—which are represented within the EC). Some EU Commissioners have promoted an integrated defense market as an economic drive for internal markets—just as other EU markets (banking, telecommunications, etc.) have undergone integration. Others called for an integrated defense market as an essential underpinning of CFSP—and ultimately of ESDP. How could Europe have shared defense capabilities without a shared defense industry?⁸⁸

A. The Early Days: Tentative Steps Away From National Buying and National Champions

As the Cold War ended, Europe had no real “European” defense markets. Rather, there were a series of national customers (Ministries of Defense, or MoD) procuring from national champions or, when it suited their interests, the United States (especially for larger platforms like the F-16 Fighting Falcon).

Given the significant cuts in European defense budgets at the end of the Cold War, it became clear during the 1990s that pan-European defense industrial consolidation was inevitable. There were simply inadequate resources, especially in smaller European nations, to sustain national champions. Yet this consolidation moved very slowly due to the complex mix of political, security and industrial base concerns inherent in cross-border defense industry consolidation, including considerations of national sovereignty, jobs, and “security of supply” fears of relying on foreign suppliers.

On the “demand” side of the equation, a number of large European cooperative armaments programs were initiated in the 1990s (e.g., Eurofighter, Tiger Attack Helicopter, Future Surface-to-Air Family (FSAF) missile, and others). Indeed, in recent years, many European nations spend in the range of 30-40 percent of their procurement budgets on European (as distinct from national) programs. The most notable area of pan-European coordinated work was perhaps in space, where the Galileo navigations satellite and other cooperative programs and ground monitoring were launched. The sheer complexity and very high cost of space made this area impossible for single nations to achieve.

Despite this gradual move toward European cooperative programs, as discussed in Chapter 4 and in country-specific chapters in Volume II, in reality most European defense buying was and is still parochial in its orientation—relying extensively, almost exclusively in some cases—on domestic suppliers for most R&T, production, and those major procurements not done cooperatively. Sensitive procurements have largely proceeded on a sole source basis to national firms. Leading domestic firms were often closely linked to their host governments and so received work as “national champions.”

⁸⁸ Ulrika Mörth, *Organizing European Cooperation: The Case of Armaments*, Rowman and Littlefield publishers, 2003.

This historically nationalistic approach to defense procurement cuts against the core principals of the European Community, which has as its central premise—inherent in its treaty obligations—the concept of a “single market.” In one area after another, the EC has removed barriers to cross-border movement of people, ideas, investment and trade. In particular, the European Community has adopted a series of measures focused on creating transparent and competitive government procurement in Europe. Perhaps the centerpiece of this effort is the EC Public Procurement Directive, which applies across the board to public contracts including defense and other areas.⁸⁹ This key Directive, among other things, is aimed at opening up public procurement to cross-border competition in the EU.

Article 296 EC Treaty: A Loophole for National Buying. Unfortunately, however, the EC Public Procurement Directive has not worked to open defense markets in Europe. Member States have directly derogated from the Directive and other applicable open market rules by invoking Article 296 of the Treaty Establishing the European Community (Article 296 EC Treaty) (in its current form, known as the 2000 Treaty of Nice). This well-known provision allows Member States to withdraw from the treaty rules if necessary for the protection of their “essential security” interests. Members routinely invoked it for defense procurements—without specific justifications in many cases—which allowed them to buy defense articles on a national or non-competed basis and justify the buys as critical to national security. Some Member States invoked Article 296 EC Treaty formally and others just assumed it applied; there is at this time no obligation for Member States to notify the EU or other Member States that it is relying on this exception.

This broad use of Article 296 EC Treaty for defense procurement reflected a longstanding desire to buy from national champions for defense needs. It also confirms that the EC Public Procurement Directive was not well suited for defense contracts since it did not take into account special features of these contracts (the need for security, the high complexity of defense systems, etc.).

On the supply side of the market, European awareness grew during the 1990s of the serious challenges facing their collective defense industries as employment decreased and European defense trade balance with the United States deteriorated. As the UK Secretary of State for Defence said in October 1997: “Europe’s defence and aerospace industry must rationalize or die.... Government can... have a role to play in facilitating international agreement which can allow mergers or joint ventures to succeed. We also can help by establishing a clear policy framework which allows industry to make sensible decision on how to rationalize.”⁹⁰ Key factors in the “urgent” European drive to defense industry consolidation were the rapid U.S. consolidation process, the fact that little had happened in Europe by 1997, and the fear in Europe of domination by large U.S. defense firms.⁹¹

The EU Commission itself became active and sought to catalyze changes in the European defense marketplace. In 1996 and 1997, “Martin Bangemann, [then] a European Industry Commissioner, called for a common approach to defence procurement, import duties, and

⁸⁹ Directive 2004/18/EC of the European Parliament and of the Council (March 31, 2004). Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:134:0114:0240:EN:PDF>.

⁹⁰ UK Parliament, Select Committee on Trade and Industry Eighth Report, *Aspects of Defence Procurement and Industrial Policy*, paragraph 30, 1997, Available at: <http://www.publications.parliament.uk/pa/cm199798/cmselect/cmtrdind/675/67505.htm#a5>.

⁹¹ *Ibid.* p. 2.

a buy-Europe policy to protect thousands of jobs.”⁹² Specifically, during this period, the EU Commission issued Communications and a Memorandum calling for Member State action to encourage a *European* defense market, with an articulated Action Plan for change.⁹³ The Action Plan called for a common European armaments policy that would cover intra-Community transfers, public procurement rules and common customer arrangements, and steps for EU action concerning defense industries.⁹⁴ The EU viewed defense industrial capabilities as a “vital strategic asset” for Europe that needed consolidation to be preserved.⁹⁵

Notably, the EU recognized that, while defense industry consolidation had progressed on a national scale in Europe, it “should be carried out on a *European* scale.” At the same time, the EU understood that such consolidation could not progress until “market barriers are lifted and a clear, reliable, political and institutional frame or reference is provided.”⁹⁶ The multiple strands of European interests came together as the Commission’s leaders saw the defense industry’s restructuring as important to developing and maintaining a strong and competitive European industrial and technological base (for civilian and military purposes), to facilitating job creation, and as a prerequisite to create a genuine European security and defense identity.⁹⁷

The Western European Armaments Group (WEAG), a group formed under the auspices of the WEU, also promoted defense market change. The WEAG’s Coherent Policy Document, issued in 1990 and again in 1999, called for cross-border competition and non-discrimination (on a nationality basis) in buying, plus improved transparency of procurement opportunities.⁹⁸

These early EC and WEAG moves did not bear fruit, however. As a consequence of concerns over sovereignty, domestic jobs and ceding too much control to the EU, Member States did not support the Commission’s early efforts to create a new legal framework or seek to develop other arrangements under the WEAG.

⁹² *London Independent*, Jan. 26, 1996. Mr. Bangemann was then the EU Commissioner for Industry and Telecommunications.

⁹³ See, e.g., “The European Aerospace Industry: Meeting the Global Challenge.” Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions (97) 466 (Brussels, Sept. 24, 1997) (“The need for restructuring is clear and urgent... [i]t is also unquestionable that the present pace of integration is too slow”—the “European Commission Communication 466”). Available at: http://aei.pitt.edu/6981/01/003416_2.pdf.

⁹⁴ See “Implementing European Union Strategy on Defence-Related Industries,” Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, European Commission Communication (97) 583 final (Brussels, Nov. 12, 1997) Available at: http://aei.pitt.edu/6249/01/003422_1.pdf.

⁹⁵ See European Commission Communication 583, Section III, p. 2; see also, “European Council Declaration on Strengthening the Common European Policy on Security and Defence,” Presidency Conclusions, Annex III, Point 2, Cologne European Council (June 3-4, 1999) Available at: http://www.europarl.europa.eu/summits/kol2_en.htm#an3. (“We also recognise the need to undertake sustained efforts to strengthen the industrial and technological defence base, which we want to be competitive and dynamic. We are determined to foster the restructuring of the European defence industries amongst those States involved.”)

⁹⁶ See European Commission Communication 583, Section I, p. 3.

⁹⁷ See *Ibid.*, European Commission Communication 583.

⁹⁸ The WEAG was a body formed under the WEU to improve cross-European armaments R&T and procurement cooperation. The basis for WEAG-wide armaments activities is the set of principles laid down in the Coherent Policy Document. That document was approved in 1990 by Defence Ministers and updated in 1999 to take into account the changes that occurred in the European armaments sector. The WEAG was closed in May 2005 and its relevant activities transferred primarily to EDA. See: <http://www.weu.int/weag/>.

While attempts were stymied at the EU level, the need for European supplier integration did become a focus of national leaders in leading European supplier countries. The UK, French and German Governments acted in December 1997, declaring in a Tripartite Statement their agreement on the urgent need to restructure the aerospace and defense electronics industries, leading to European integration based on balanced partnership. The governments called on three leading European defense and aerospace firms—British Aerospace (BAE), Aerospatiale-Matra and Daimler-Benz Aerospace (DASA)—to develop proposals to integrate their civilian and defence operations.⁹⁹

This three-way merger did not take place as BAE decided to go in another direction and merge with its largest UK competitor, Marconi Electronic Systems, a subsidiary of GEC.¹⁰⁰ However, on the Continent, Aerospatiale and DASA did merge, resulting in the formation of the European Aeronautical, Defence and Space Company (EADS). A subsequent series of mergers led to the formation of a European space company (Astrium) and missile company (MBDA) among others.

B. Multinational Initiatives For Integration: The LOI and OCCAR

As these debates proceeded publicly, some European governments recognized the need to put in place a framework to facilitate consolidation and better integration. The initial impetus for the European governments to act together to create an enabling framework was a proposed UK-French merger in 1997 of Royal Ordnance and SNPE, suppliers to the UK and French governments respectively.¹⁰¹ The UK and French governments recognized such a merger would leave both governments dependent on a combined supplier and questions arose on security of supply and developing priorities post-merger.

Security of supply was a very real anxiety to European governments as they considered transnational supplier consolidation. Belgium’s unwillingness to provide the UK with shells during the Gulf War in 1991 was well known. Moreover, a proposed ammunition joint venture between Royal Ordnance and Giat of France, foundered over security of supply difficulties.¹⁰²

While the Royal Ordnance-SNPE merger never ensued, the UK and French governments commenced discussions on “security of supply” that ultimately were expanded to include Germany, and subsequently Italy, Spain and Sweden. The reality of ongoing cross-border mergers and acquisitions convinced the six nations representing approximately 90 percent of European defense production to develop a practicable framework for consolidation.

Thus, in the context of both the 1997 EU Communication on defense markets and the 1997 Tripartite Declaration, these six nations signed an LOI to facilitate European defense industrial integration in July 1998.¹⁰³ Subsequently, the six LOI countries (hereinafter called

⁹⁹ See Gordon Adams, et al., “Between cooperation and competition: the Transatlantic defence market,” Chaillot Paper 44, Annex B—Joint Statement by the President of the Republic and the French Prime Minister, the Chancellor of the Federal Republic of Germany and the Prime Minister of the United Kingdom on Dec. 9, 1997, as referred to in UK Ministry of Defense Press Notice 208/97 (January 2001) Available at: <http://aei.pitt.edu/504/02/cha44e.pdf>.

¹⁰⁰ See Press Release, “Merger of the Defence Electronics Business of the GEC with British Aerospace,” Marconi Corporation plc. website (originally released Nov. 26, 1999).

¹⁰¹ See COM (1997) 583 final, *supra*.

¹⁰² UK Parliament, Select Committee on Trade and Industry, Eighth Report, “Aspects of Defence Procurement and Industrial Policy,” paragraph 20, 1997 (citing 1995 report). Available at: <http://www.publications.parliament.uk/pa/cm199798/cmselect/cmtrdind/675/67504.htm>.

¹⁰³ See: <http://www.parliament.the-stationery-office.co.uk/pa/cm200203/cmselect/cmdfence/694/694we15.htm>.

the “LOI 6”) convened a series of working groups to focus on putting more detailed “hard-wiring” in place in each of a series of six core areas: security of supply; export controls and procedures; security of classified information; defense related R&T; treatment of technical information (intellectual property, or IP); and harmonization of military requirements. The LOI 6 apparently decided to act separately from the EU due to the ease of getting something accomplished in a smaller group that had the principal equities in the area, as well as some level of distrust of action by the Commission (and the fear of additional regulatory process it might bring).

Subsequently, after several years of focused efforts, on July 27, 2000, the LOI 6 signed a *Framework Agreement Concerning Measures to Facilitate the Restructuring and Operation of the European Defence Industry* (the “Framework Agreement” (FA) and, together with the LOI, the LOI-FA). The Framework Agreement is a legally binding treaty requiring ratification by the signatories in accordance with national processes. All six LOI countries ratified the Framework Agreement and it finally entered into force on October 2, 2003. (The Framework Agreement included a procedure for Accession by Other European States (Article 56), but this has not been invoked to date.¹⁰⁴)

The Framework Agreement codifies the LOI, and fleshes out in more detail the key rules and modes for coordination in six major areas agreed by the Parties:

- **Security of Supply.** To establish measures for “security of supply for the mutual benefit of all Parties,”¹⁰⁵ to encompass: 1) retention of key strategic activities and assets for national security reasons, or, in exceptional circumstances, reconstitution of supply facilities for national security;¹⁰⁶ and 2) a supply prioritization process and allocation for times of emergency, crisis or armed conflict (but not peacetime) whereby the Parties agree to provide priority in ordering or reallocation of defense articles and services to another Party.¹⁰⁷
- **Export Procedures.** To establish means to simplify transfers among Parties through:
 - “Global Project Licenses”—a one-stop export license for cooperative armament programs, obviating other specific authorizations;¹⁰⁸ and
 - Procedures for exports to non-parties of defense articles and services developed or produced in a cooperative armament program.¹⁰⁹
- **Security of Classified Information.** To create procedures to harmonize security classifications and establish reciprocal industrial security procedures (with each nation modifying its national laws as needed to implement the procedures).¹¹⁰
- **Defense Related R&T.** To establish methods to:

¹⁰⁴ Framework Agreement, Art. 56.

¹⁰⁵ Framework Agreement, Art. 4.1.

¹⁰⁶ Framework Agreement, Arts. 4.1, 7 & 8.

¹⁰⁷ Framework Agreement, Art. 10. The process for peacetime includes consultation, and no commitment to afford priority treatment.

¹⁰⁸ Framework Agreement, Art. 12.

¹⁰⁹ Framework Agreement, Art. 13.

¹¹⁰ Framework Agreement, Arts. 21 & 23.

- Exchange information on R&T policies, programs and technologies for “harmonization and a more coordinated approach”;¹¹¹
- Create a code of conduct for proposals, funding and awarding R&T contracts;
- Use competition as “the preferred method” for R&T contracts, except where “detrimental” to “critical security interests”; and
- Undertake common R&T activities for “global return” rather than requiring traditional *juste retour* on an individual project basis.
- **Treatment of Technical Information in Government Contracts.** To establish rules on ownership and disclosure of “Technical Information” to harmonize approaches on IP in national and co-operative defense procurement contracts,¹¹² and
- **Harmonization of Military Requirements.** To harmonize the requirements of their armed forces “by establishing a methodology that improves coordination across all collaborative bodies” in Europe and sets out a “permanent process.”¹¹³

Subsequent to the signing of the Framework Agreement, the LOI 6 negotiated and adopted a series of detailed implementing arrangements in each of these areas over several years.

The LOI/FA Contribution: Easing European Anxieties over Supplier Globalization

The LOI-FA and the ensuing implementing arrangements, ratified by the six largest defense spending nations, were a major step forward; the six detailed areas of the LOI-FA are key elements that must be put in place in order for nations to collaborate in a cross-national defense market.

Tangible Results. Overall, the LOI-FA process, while lengthy and cumbersome, produced some tangible results as measured in terms of legally binding commitments and the “leveling up” of standards in a number of areas among the LOI 6. The LOI-FA also facilitated the process of European defense supplier consolidation, and effectively began to put in place the underlying “hardwiring” for globalization.

The most tangible results of the LOI negotiation process, with most direct benefits, are in the areas of security of supply, technical information and security of information, where detailed standards have been adopted that have largely harmonized rules of the Participants and resulted in mutual recognition that facilitate enhanced international industrial cooperation. The use of the same contract terms for IP protection is and will provide benefits to both the LOI 6 and their suppliers—relieving anxiety over unfamiliar provisions that might affect IP rights and streamlining negotiations. The rules on classified information appear to be providing tangible benefits in terms of recognition of security clearances and shortened times for approval of visit requests. Finally, the security of supply arrangements serve as a “backstop” for governments should problems arise with respect to the location of strategic activities or the need for priority treatment.

¹¹¹ Framework Agreement, Art. 28.

¹¹² Framework Agreement, Art. 2 (m). Technical Information includes “experimental and test data, specifications, designs and design processes, inventions and discoveries... technical descriptions... know-how and trade secrets and information relating to industrial techniques...” Ibid.

¹¹³ Framework Agreement, Art. 45.

Impact on Supplier Globalization. Perhaps the most positive impact has been to relieve anxieties among the LOI supplier governments—primarily about security of supply. As discussed above, there were legitimate concerns in this area, born of real experiences, which the LOI-FA process and Security of Supply Implementing Arrangements sought to address. Unlike in the United States, the process of industrial rationalization created the prospect that LOI governments could end up potentially reliant wholly on a foreign capability for a key strategic need. Hence, numerous European observers believe the LOI-FA process, and ultimately the binding rules adopted, helped allow governments to feel more comfortable about this risk and thus facilitated the defense industrial consolidation process within Europe, and the consolidation of transnational firms like EADS, the European leader in aeronautics, and MBDA, the European missile producer.

While the degree of this impact is not quantifiable, it is a reasonably safe conclusion that Europe would not have experienced the degree of supplier consolidation and the interdependence it engenders without some type of explicit assurances on security of supply.

Areas With Less Significant Results. In other areas, the LOI-FA process has produced less meaningful results. The export rules, while interesting and potentially useful for cooperative programs, have barely been used. The LOI-FA processes on military harmonization and R&T yielded few results and have had little impact.

Overall, the LOI-FA process also planted seeds that set the stage for deepened European cooperation and the adoption of more robust standards on competition, procurement, and other disciplines within Europe. Representatives of both industry and government interviewed for this study reported that a primary contribution of the LOI-FA was to establish a forum where the representatives of the Governments regularly meet to discuss the six areas outlined toward better cooperation—but LOI-FA itself did not create permanent EU structures. To quote an MoD official (from one of the nations making up the LOI 6) who was interviewed for this study: “LOI turned out to be an intellectual engine to allow the six nations to reach some agreements. The model now is to hand it over to the EDA, piece by piece.”

OCCAR: Toward More Enlightened Cooperative Project Management

Finally, in addition to LOI, another major development was the establishment by a group of nations—not the EU—of the *Organisation Conjointe de Coopération en matière d'Armement* (Joint Organization for Armaments Cooperation, or OCCAR) to manage joint armaments programs. OCCAR was established by an Administrative Arrangement on November 12, 1996, by the Defence Ministers of France, Germany, Italy and the UK. Its aim is to provide more effective and efficient arrangements for the *management* of certain existing and future collaborative armament programs.

The Defence Ministers of the four founding Nations went on to sign a Treaty, the “OCCAR Convention,” which was subsequently ratified and came into force on January 28, 2001. The Convention gives OCCAR its legal status, allowing it to place and manage contracts, and to employ its own staff. Belgium and Spain joined OCCAR, respectively, in 2003 and 2005. The Netherlands, Luxembourg and Turkey are actually participating in a program, without being members of the organization.

The purpose of OCCAR is to provide program management for collaborative programs, not to create collaborative programs or policies. To that end OCCAR is complementary to

and not overlapping with the EDA. One of OCCAR’s explicit corporate strategies is that it shall develop an interface with the EDA, “to establish and exploit synergy between the two organisations and to pursue actions beneficial to both organisations.”¹¹⁴ The concept of OCCAR is to bring together and leverage best (or better) practices among the nations participating in cooperative programs, including issues of *juste retour* on a broader, possibly cross-program or cross-industry basis (not dollar-for-dollar as in past).

OCCAR thus is designed to operate on the basis of improved buying practices that draw on the lessons of past cooperative programs, ensure more efficiency in joint armament efforts, and enhance the competitiveness of the European defense industrial base. Specifically, the OCCAR Convention establishes five guiding principles:

1. **Renunciation of program-specific *juste retour*.** The pre-existing principle of matching national outlays on individual programs precisely to national workshares is rejected in favor of the principle of “global balance,” whereby national work shares are balanced over a number of programs. This is designed to allow more flexible and efficient supplier selection, and will be reviewed in three years to consider progress toward unrestricted competition.
2. **Flexible Voting.** OCCAR has established a system of qualified majority voting, rather than unanimity, for decisions related to central operating policies, with decisions on individual programs made on a case-by-case basis by those involved. Founding members will have a veto for at least three years.
3. **Competition.** OCCAR’s contracts will be awarded on the basis of competitive bidding. While there is no requirement for European solutions, each Member State will “give preference to equipment in whose development it has participated within OCCAR.” This approach is designed to facilitate a strong and competitive European defense industrial base while maintaining the possibility of global competition.
4. **Reciprocal Access.** Bids from firms in non-Member States will require unanimous agreement from participants in the specific program and will be subject to the principle of reciprocity (i.e., the supplier’s market should be similarly open).
5. **New Members.** OCCAR is open to other *European* nations, subject to their acceptance of OCCAR’s underlying principles and a commitment to participate in a major project involving at least one other OCCAR member country.

Notably, there is no sense that OCCAR is open for programs with U.S. participation—OCCAR’s standard management briefing defines itself as a multinational organization open to European membership.

OCCAR today manages six major cooperative programs, each involving somewhat different combinations of national partners:

- A400M—A Tactical and Strategic Airlifter
- Boxer—A Multirole Armoured Vehicle
- COBRA—Weapon Locating System
- FREMM—Frégates Europeennes Multi-Missions

¹¹⁴ OCCAR Business Plan 2008. Business plans and other details on OCCAR are available at: <http://www.occar-ea.org>.

- FSAF and munitions for the Principal Anti-Air Missile System
- Tiger—A New Generation of Helicopters

Consistent with its objectives of ensuring the more efficient use of national resources in cooperative programs, OCCAR has established a series of strategic initiatives to improve and coordinate processes in a full range of acquisition program management functions. These include: streamlining budget and financial management, developing strong program risk assessment and management processes, integrating information technology and internet capabilities among nation/program participants, and improving logistics support.

In practice, OCCAR has met some of its Charter's obligations and is working to fulfill others. While OCCAR is trying to implement the global *juste retour* concept, it cannot yet fully do so because it has few programs of equivalent value. As more programs come under its control, it will be able to better achieve this aspiration. On the other hand, flexible voting is a reality on OCCAR programs and there is competition in OCCAR procurement (especially at the subcontractor level). While OCCAR states that it is seeking "best value," there continues to appear to be some element of political consideration (e.g., the impact of decisions on program viability) in its decision-making.

In sum, OCCAR is working to evolve into a full-up, highly capable program management center for bilateral, multilateral or EU-wide programs that can provide more efficient management and results. Over time, OCCAR is very likely to become the official procuring agency for the EU with the EDA as the EU policy development arm.¹¹⁵

European Supply Consolidation Precedes Changing Buyer Behavior

In sum, through 2004, a number of steps were taken to add "building blocks" for an evolving EU market framework, including the LOI-FA and OCCAR. Other than the LOI and OCCAR, the primary changes were largely on the supply side of the equation, where there was significant consolidation of the large aerospace and defense firms (especially in the areas of military aircraft, missiles, space, and defense electronics).

In contrast, there was little real change on the demand side of the market. In effect, the supplier consolidation moved markedly more quickly than changes in national buying practices. Despite years of EU initiatives, studies and reports decrying the deleterious long-term effects of defense market fragmentation and lack of competition, EU Member States continued the prevailing pattern of nationally oriented buying until very recently. This is seen vividly in the armored vehicle area. As G. Verheugen, Vice President of the European Commission (EC) and Commissioner for Enterprise and Industry, noted recently, "[t]he EU has 4... main battle tanks and 23 national programmes for armoured fighting vehicles. By adding other examples, one reaches a total of 89 weapons programmes in the EU compared to only 27 in the United States."¹¹⁶

Indeed, Member States have continued to invoke Article 296 EC Treaty's "essential security interests" exemption to retain buying autonomy and keep the EU largely out of national defense markets. Their success in doing this is reflected in the EC's December 2007 Com-

¹¹⁵ This goal for OCCAR was publicly stated in the past year by Alexander Weis, CEO of EDA. When asked if the EU would be creating a Procurement agency similar to NAMS, for example. He said that there was no need to create such an agency, but rather that the operational procedures of OCCAR will allow it to take on that role in the future.

¹¹⁶ G. Verheugen, VP, EC Enterprise and Industry, EDA Conference Brussels, Feb. 1, 2007, EU Europa Press Release.

munication on the proposed Defense Package, discussed in detail below, which reported that “[h]istorically about 85 percent of defence buying is exempted from the public market via Article 296” Member States have also invoked Article 296 with respect to mergers and acquisitions, which allows them to make decisions with a more national view rather than under EU competition law principles. And, as discussed above, many EU nations continued an active program of “offsets” despite EU admonitions against them.

C. The EU Focus on Defense Markets Gains Momentum: 2003-2008

After a number of years of little demand side change, European nations and the EU have, in European terms, moved relatively quickly to create new processes, institutions, and rules relating to the defense market described below. Despite the caution in Member States over affording too much authority to Brussels, the European Council, Commission and Parliament have taken a series of actions to move this agenda forward:

November 3, 2003—EU Commission Issues Communication “Towards an EU Defence Equipment Market.”¹¹⁷ This paper, following a series of earlier EU Communications, really kicked off the process of creating a European institutional framework for a defense market. It announced a series of seven initiatives designed to establish a more efficient European defense equipment market that led to a number of the developments set forth below. These included, among other things, plans for issuing an EU Commission communication interpreting the use of Article 296 EC Treaty as it applies to defense markets and a defense procurement green paper.

July 12, 2004—EU establishes the EDA.¹¹⁸ The creation of the EDA was a real achievement as there had been considerable consternation about such a body, and the UK among others had resisted this move. As a compromise, the EDA was created as an inter-governmental body of the EU—under the direct authority of the Member States and the EU Council—rather than under the auspices of the EU Commission. The distinction is an important one as the Commission has the authority to promulgate legally binding directives and regulations while the Council, and EDA as a derivative, have no such regulatory authority and must effectively act via consensus (e.g., through intergovernmental arrangements or voluntary codes).¹¹⁹

The EDA’s primary mission is to eliminate fragmentation and work to create a more coherent European defense market, and ultimately more coherent European military capability. The EDA is the first EU-initiated armaments agency, a formally chartered activity incorporating and supplanting the activities and elements of earlier organizational attempts such as the WEAG. The EDA also picks up on the work done by the LOI 6 and, as discussed below, some of its early initiatives apply LOI-type arrangements on an EU-wide basis. The EDA is overseen by a Steering Board of 26 EU Defense Ministers, and works for the EU Council under the ESDP head, Javier Solana (not for the EC although the EC has one representative on the EDA Steering Board). Based in Brussels, it is intended to remain a

¹¹⁷ EC Communication 113 (Nov. 3, 2003). Available at: http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=COMfinal&an_doc=2003&nu_doc=113.

¹¹⁸ Council Joint Action 2004/551/CFSP of July 12, 2004, on the establishment of the European Defence Agency. EDA is what EU documents called the “Agency in the field of defence capabilities development, research, acquisition and armaments”. See: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_245/l_24520040717en00170028.pdf.

¹¹⁹ For a discussion of the term “intergovernmental,” see footnote 32.

small agency (about 100 people). The staff is organized into a small corporate staff and four Directorates: Capabilities, R&T, Armaments, and Industry and Market.

The EDA is leveraging the other steps (described below) taken by the EU and EC to concretize the ESDP in the armaments realm. EDA also is leading a series of initiatives of its own: to create uniformity and transparency in procurement, and to coordinate and harmonize EU-wide capability requirements, R&T and armaments resources. EDA is *not* intended, at least at present, to become a day-to-day acquisition management activity or joint program office. As noted above, OCCAR is currently serving this function for joint programs for EU nations, and it coordinates with EDA via an informal relationship. Over time a formal linkage may evolve and OCCAR may be folded into EDA. At this point, however, there are no official plans in that direction.

September 23, 2004: EC issues Green Paper on Defense Procurement. Virtually contemporaneously with the creation of EDA, the EC issued a Green Paper outlining the deleterious effects of fragmentation of the European defense market, and suggesting options for the EU to increase transparency and market openness. This Green Paper took “head on” the misuse of Article 296 by Member States. According to a Report by an EU Task Force, led by Burkard Schmitt (then at the Institute for Strategic Studies, an EU think tank, and now with the EC), “[a]lthough this exemption is subject to certain conditions, most governments have treated Article 296 as quasi-automatism, excluding defense procurements almost completely from Community rules.”¹²⁰

November 2005—European Parliament adopts a Non-Legislative Resolution on the Green Paper, with nearly unanimous support. Specifically, the Parliament found “the hermetic segregation of armaments markets is also the cause of a lack of standardisation and... lack of interoperability between systems... 25 different sets of rules on procurement are in force [which] constitutes an obstacle to implementation of the European Capabilities Action Plan.” As the Resolution further states,

Member States and the industry [must] abandon the reservations which for decades have stood in the way of a European defence market... current policies of *juste retour* and off-setting in the field of military procurement lead to large-scale distortions of competition and artificial divisions of labour between industrial partners, and greatly hinder the efficiency of public procurement.¹²¹

The Parliament expressly recognized the new EDA as a forum for action, but also called upon Member States to change their practices and noted the need for binding action by the Commission. As it stated:

Pressure should be placed on national defence procurement agencies to alter the general practice of taking advantage of the derogation contained in Article 296 EC Treaty... the Commission should both adopt an interpretative Communication reflecting its determination to stop the misuse of Article 296 EC Treaty and

¹²⁰ B. Schmitt, A. James, T. Kirat, M. Lundmark, M. Nones, and J. Rohde, *Defense Procurement in the EU: the Current Debate*, EU Institute for Security Studies, EU ISS Task Force Report, 2005.

¹²¹ European Parliament resolution on the Green Paper on defence procurement (2005/2030(INI)) P6_TA(2005)0440 Defence procurement, Nov. 17, 2005. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P6-TA-2005-0440+0+DOC+WORD+V0//EN>. Also see http://www.wsibrussels.org/weapons_procurement.htm.

start to develop, in parallel, a new directive, tailored to the specific features of defence.¹²²

December 7, 2006—The EU issues an Interpretive Communication on the Application of Article 296. This Communication, designed to give guidance on the application of Article 296 EC Treaty to defense procurement contracts, clearly signaled increasing constraints on the ability of Member States to use this exemption in a wholesale manner. Specifically, it articulated a *narrow* interpretation of Article 296 based on the European Court of Justice’s (ECJ) rulings and its own authority—i.e., that nations must prove Article 296 is properly invoked, especially in circumstances where it is used to derogate from fundamental rules of the European Community such as freedom of movement of goods and services, as well as in the area of public procurement.¹²³ Specifically, as the Communication stated:

The Treaty... contains strict conditions for the use of this derogation.... The aim... is to prevent possible misuse and to ensure that the derogation remains an exception limited to cases where Member States have no other choice than to protect their security interests nationally. The Court of Justice has consistently made it clear that any derogation from the rules intended to ensure the effectiveness of the rights conferred by the Treaty must be interpreted strictly. In ‘Commission vs. Spain’, the Court ruled that articles in which the Treaty provides for such derogations (including Article 296 [of the Treaty Establishing the European Community]) ‘deal with exceptional and clearly defined cases. Because of their limited character, those articles do not lend themselves to a wide interpretation’.¹²⁴

The Commission went on to note that, as the “guardian” of the Treaty Establishing the European Community, it has the authority to verify that the conditions for an Article 296 exemption have been met, and that Member States, during a Commission investigation of a defense procurement case, should “furnish evidence that, under the specific conditions of the procurement at issue, application of the Community Directive [on procurement] would undermine the essential interests of its security.”¹²⁵ In sending a clear signal to Member States, the Communication further noted “[g]eneral references to the geographical and political situation, history and Alliance commitments are not sufficient in this context.”¹²⁶ Lest there be any doubt, the Commission goes on to state it has the right to bring the matter to the ECJ if it considers that a Member State is improperly invoking Article 296 EC Treaty.

In short, this Communication plainly increased the pressure on Member States to curb their use of Article 296 and bring defense procurements into the EU’s public procurement framework, which calls for transparent and competitive procurement as the norm.

¹²² Ibid. A majority of 392 members against 77, with 7 members abstaining. European Parliament Non-Legislative Resolution, Nov. 17, 2005.

¹²³ Interpretive Communication *On the application of Article 296 of the Treaty in the field of defence procurement* (presented by the Commission), Brussels, COM(2006) 779 final, Dec. 7, 2006 (“Interpretative Communication”).

¹²⁴ Interpretative Communication, p. 5 (quoting Judgment of Sept. 16, 1999, Case C-414/97 *Commission v. Spain*, par. 21; judgment of May 15, 1986, Case C-222/84 *Johnston*, par. 26.)

¹²⁵ Ibid., p. 8.

¹²⁶ Ibid.

December 5, 2007—The Commission Issues the “Defense Package.” Finally, and perhaps most significantly, the EC itself took serious action toward creating a European defense market, and eliminating national market fragmentation and duplication, when it issued a set of *proposed* directives on defense procurement on December 5, 2007. The EC Defense Package, the first effort by the Commission to put in place binding rules on the defense market, is discussed in detail below. The Defense Package has three parts that together are intended to provide a “harmonizing” legal framework for defense procurement (which at this time does not include R&T):¹²⁷

- **EC Communication:** This transmittal document explains the EU “[s]trategy for a Stronger and More Competitive European Defence Industry.”¹²⁸
- **EC Defense Procurement Directive:** The directive sets forth a “[p]roposal for... [p]rocedures for the award of certain public works contracts, public supply contracts and public service contracts in the fields of defence *and* security.”¹²⁹
- **EC Transfers Directive:** Finally, the companion transfers directive, a first effort by the EC to address export controls, an area typically left to Member States, incorporates a “[p]roposal... for [c]oordination of Procedures on simplifying terms and conditions of transfers of defence-related products within the Community.”¹³⁰

The EC Defense Package is the culmination of years of prior efforts by national cooperation, EU and other European bodies. It builds on the EU initiative and Action Plan sponsored by Mr. Bangemann in 1997 and the 2003 Communication.¹³¹ It also incorporates and builds on elements of the LOI arrangements but with a broader national participation (all 27 EU Member States rather than just the LOI 6) and within an EU legal framework.

A New Dynamism: EC Plans for Future Actions

The EC also has stated its plans to add to the EC Defense Package. First, in the Communication, the EC has declared that it plans to commence a security of information initiative to harmonize the treatment of sensitive and classified information across Member States (building on the LOI-FA and the LOI Technical Information Implementing Arrangement

¹²⁷ While some Research and Development processes have been added in the new European Council text of the French Presidency, given the ongoing review process of these Directives it is not clear what aspects, if any, of R&D may be included in the text once finalized. France’s President Sarkozy is also the President of the EU July-December 2008. The French Presidency text is the version with the set of amendments developed or competed during this period.

¹²⁸ EC Communication to the Council, the European Parliament and the European Economic and Social Committee and the Committee of the Regions: *A Strategy for a Stronger and More Competitive European Defence Industry*, Introduction, Dec. 5, 2007. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52007DC0764:EN:NOT>.

¹²⁹ EC proposal for a Directive of the European Parliament and of the Council *on the coordination of procedures for the award of certain public works contracts, public supply contracts and public service contracts in the fields of defence and security*, released Dec. 5, 2007, EU document reference number COM(2007) 766 final, 2007/0280 (COD Hereinafter referred to as the “EC Proposed Procurement Directive.” Available at: http://ec.europa.eu/internal_market/publicprocurement/dpp_en.htm#comm.

¹³⁰ EC Proposal for a Directive of the European Parliament and of the Council *on simplifying terms and conditions of transfers of defence-related products within the Community*, released Dec. 5, 2007, Brussels.) EU document reference number COM(2007) 765 final 2007/0279 (COD). Hereinafter referred to as the “EC Proposed Transfers Directive.” Available at: http://ec.europa.eu/enterprise/regulation/inst_sp/defense_en.htm#prop.

¹³¹ EU Communication, Brussels, Nov. 12, 1997, EU document reference number COM (97) 583 final, Commission Communication to the Council, The European Parliament, the Economic and Social Committee and the Committee of the Regions, *Implementing European Union Strategy on Defense Related Industries*. Available at: http://ec.europa.eu/internal_market/publicprocurement/docs/defence/com97-583-final_en.pdf.

in this area). Currently, the EU is only at the stage of collecting data on security clearances in EU Member States, and says it *does not plan a new Directive* in this area (contrary to what is announced in the Communication).

Foreign investment/ownership study. The EC commenced a one-year study on how control of strategic assets might be undertaken in the future, particularly focusing on options for review and action ensuring competitive supply at the European level without sacrificing national security interests. The study is apparently examining whether the EU should adopt an approach to review of foreign acquisitions like that employed by the Committee on Foreign Investment in the United States.

U.S. Market Access Barriers for European Firms—In July 2008, the European Commission launched a call for a study entitled “*Study on the nature and impact of barriers to trade with the United States for European defense industries.*” The study is currently underway and we could find no study results available at this time.

Why the new European dynamism on the defense market? A number of factors created an impetus for change:

- **Economic and Budgetary Realities.** There is a growing sense in Europe that the underlying economics—low defense budgets, fragmented buying, and rising weapons costs—must be addressed because they are creating inefficiencies and limiting Europe’s ability to field capable forces. As the EC’s December 5, 2007, Communication observed, Europe’s current defense industry annual turnover of about €55 billion (about \$82.5 billion) and employment—300,000 employees—are one half the level of 20 years ago.¹³² A 2005 report written by European experts summarized the EU view of the growing imperative for change:

The relatively small size of European defense budgets, escalating R&D costs of complex weapon systems and increasing internationalization of defense industries have made it indispensable for Europe to move towards a common [European] defense equipment market (EDEM). Current market fragmentation is... too costly and inefficient to maintain a competitive EDTIB and equip European armed forces adequately. [With] the establishment of an [European defense equipment market]... European companies would share a much larger home market and could restructure across borders.... Competition would encourage suppliers to optimize capacity... [saving] scarce public finances.¹³³

- **Changing Capability Needs.** Underlying changes in the threat, and the resulting need to reorient forces and work in international coalitions, is also a driver of change. Today’s demands for coordinated efforts for security, ranging from “homeland” security to stabilization missions (civil/military) to full “hard warfare” call for a scale and depth of military capabilities no nation can take on alone. As ESDP gains traction and the EU increasingly engages in expeditionary missions abroad, there is a growing disconnect between the need for these types of more integrated

¹³² EC Communication to the Council, the European Parliament and the European Economic and Social Committee and the Committee of the Regions: *A Strategy for a Stronger and More Competitive European Defense Industry*, Introduction, Dec. 5, 2007.

¹³³ B. Schmitt, A. James, T. Kirat, M. Lundmark, M. Nones, and J. Rohde, *Defense Procurement in the EU: the Current Debate*, EU Institute for Security Studies, EU ISS Task Force Report, 2005. pp. 10-11.

defense capabilities and operations, on the one hand, and the fragmented defense market supplying these capabilities, on the other hand.

- **Supplier Consolidation Creates Pressures for Changed Buying.** Ironically, the creation of a number of European defense suppliers with scope and breadth has created more pressure for governments to change their buying practices. These firms point out that changes in the demand (or buyer) side are crucial to sustaining them—these firms want their buyers to develop larger buys that can create more affordable and cost-effective products. Today, these firms, such as EADS, Thales, Finmeccanica, and MBDA, are largely “multidomestic” in nature—operating in multiple national defense markets. They suffer from the plethora of European procedures and standards they must comply with. European systems and products also are more expensive to make, given the extraordinary burden of incorporating needs from multiple national military forces and buying bureaucracies. The resulting inefficiencies of national buying have led increasingly to the realization of the need to better integrate the demand side of the market. Indeed, without these types of changes, as a long-term matter, European supplier consolidation makes little real sense.

III. The EU Defense Market Today: A Report Card on the New Framework

A core question is whether the EU and EC initiatives of the last five years (some ongoing and not yet implemented) have been gaining traction and a real European defense market is taking shape, as distinct from a series of national markets with national buying and fragmented export licensing. As this “progress” report shows, the formalization—and *legalization*—of a structured framework for an EU defense market is moving fairly rapidly forward “in European terms” and is gaining the serious attention of national governments and industries.

If one looks at a transparent and competitive public procurement market, it typically is marked by several key elements:

- **Rules on Competition and Transparency.** A core aspect of a public procurement market is a clear and predictable set of rules establishing, subject to exceptions, principles of full and open competition and transparency in the procurement process (including the publication of solicitations and criteria for award).
- **Judicial Recourse.** To establish buyer discipline, there is the need for some right of recourse if rules are not followed; typically this involves the right of access to courts.
- **Buyer Discipline and Behavior.** Finally, there is consistent behavior of the buyer in abiding by the rules, in structuring clear requirements and specifications, and in managing the procurement in a fair and reasonable manner.

When viewed in this context, a set of rules are being shaped, the judiciary is beginning to play a meaningful role, and the behaviors of buyers are beginning to change. However, the framework is incomplete, will take years to fully put in place, and raises a series of issues for the United States.

A. The Growing Role of the European Court of Justice

Recent rulings of the European Court of Justice (ECJ) are considerably enhancing the EU’s role in the regulation of defense markets. Of particular note are the ECJ’s rulings to construe narrowly the application of the “essential security” exemption of Article 296 EC Treaty, and its enforcement of EC competitive tendering rules—critical to the functioning of a competitive market—where the Member States were failing to adhere to public sector procurement directive requirements.

In a September 1999 judgment on the *Commission v. Spain*, the ECJ provided the very first interpretation of Article 296 EC Treaty, after having avoided the provision in previous judgments for decades. Contrary to a specific EC directive, Spain had exempted all its armaments exports from Value Added Tax and invoked Article 296 to justify the exemption. The ECJ squarely rejected this action, clarifying that Article 296 does not represent an automatic or categorical exclusion of armaments from the application of the EC Treaty.¹³⁴ As a derogation it needs to be narrowly defined,¹³⁵ the Court concluded, because “[i]f every provision of Community law were held to be subject of a general proviso, regardless of the specific requirements laid down by the provisions of the Treaty, this might impair the binding nature of Community law and its uniform application.”¹³⁶ As the ECJ ruled, Member States need to specifically invoke and substantiate the exemption and prove that a situation justifying its use actually exists.¹³⁷

Therefore, the judgment in *Commission v. Spain* confirmed a narrow interpretation of Article 296(1)(b) EC Treaty, an interpretation recently reiterated in the Interpretative Communication of the Commission discussed above.¹³⁸ Hence, armaments are not categorically outside the scope of the EC Treaty, but they can be ‘taken outside’ on a case-by-case basis if certain requirements are fulfilled. Despite this narrow interpretation, Member State practice before and after the judgment in *Commission v. Spain* reveals that many Member State defense procurement authorities—in ignorance or defiance of the ruling—still treat Article 296(1)(b) EC Treaty as an automatic or categorical exclusion of armaments from the regime of the EC Treaty.¹³⁹

Similarly, a series of cases involving Italy further confirm the limited nature of the Article 296 EC Treaty exemption. For five years the EC has pursued actions against Italy regarding its decisions to buy helicopters outside EC Public Procurement Directive. The first case was launched in December 2003, when the EC filed an official complaint against Italy at the ECJ regarding its decision to allow Italian public authorities to buy helicopters directly without implementing EC Public Procurement Directive, i.e., without a proper call for tender procedures. On June 2, 2005, the ECJ published the Opinion of the Advocate-General,

¹³⁴ Case C-414/97, [1999] ECR I-5585, [2000] 2 CMLR 4. For case notes see: M. Trybus “The Recent Judgment in *Commission v. Spain* and the Procurement of Hard Defence Material” (2000) 9 *Public Procurement Law Review* NA99 and “On the Application of the E.C.-Treaty to Armaments”, (2000) 25 *European Law Review* 633.

¹³⁵ Case C-222/84 *Marguerite Johnston v. Chief Constable of the Royal Ulster Constabulary* [1986] ECR 1651, [1986] 3 CMLR 240, at paragraph 26. See also Case C-13/68 *SpA Salgoil v. Italian Ministry of Foreign Trade* [1968] ECR 453, at 463, [1969] CMLR 181, at 192 and Case C-7/68 *Commission v. Italy* [1968] ECR 633 at 644.

¹³⁶ Case C-222/84, *Ibid.*, at paragraph 26.

¹³⁷ For details on the ECJ case on Spain, see M. Trybus, “The EC Treaty as an instrument of European defence integration: judicial scrutiny of defence and security exceptions,” 2002 (39) *Common Market Law Review* 1347-1372.

¹³⁸ Interpretative Communication [of the Commission] on the application of Article 296 of the Treaty in the field of defence procurement, COM (2006) 779 final, Dec. 7, 2006, not yet reported.

¹³⁹ *Ibid.*

recommending the Court to rule in favor of Italy, agreeing with its defense of an “urgent situation” that allowed them to invoke the lack of time to launch a proper procedure.¹⁴⁰

In a second case, C-337/05, September 2005, the EC officially took Italy to the ECJ because of the “Italian Government’s long-standing policy of awarding contracts directly and without competition to the Italian company Agusta for the supply of helicopters for civilian use by various public services,” says the EC document. This time the complaint was described differently, and the ECJ responded differently. In April 2008, the ECJ ruled that Italy violated the EC Public Procurement Directive by following its established practice of granting contracts to Finmeccanica’s Agusta for the sale of helicopters on a sole source basis without the use of competitive procurement procedures.¹⁴¹ Specifically, Italy awarded a contract to supply helicopters to meet the requirements of several military and civilian corps of the Italian government, including the Fire Brigade, Forestry Service, and Coast Guard.

Notably, Italy had sought to defend its directed award to Agusta under Article 296 EC Treaty, among other grounds, arguing that the helicopters were dual-use in nature and could be used for both military and civilian purposes. Hence, with the potential of military use (but not the actuality), Italy asserted it should be allowed to claim an exemption from the public tendering rules under Article 296 EC Treaty because of its alleged “essential interests” in security. Significantly, however, the ECJ squarely rejected this claim. Specifically, the court ruled that “It is clear from the wording of [296]... that the products in question must be intended for specifically military purposes. It follows that the purchase of equipment, the use of which for military purposes is hardly certain, must necessarily comply with the rules governing the award of public contracts. The supply of helicopters to military corps for the purpose of civilian use must comply with those same rules.”¹⁴²

In a third case, C-157/06, the EC launched another official complaint to the ECJ on March 23, 2006, objecting to the Italian government’s use of the derogations permitted under Article 2(1)(b) of the Directive on Public Procurement for Supplies contracts 93/36, allowing them to purchase “light helicopters for the use of police forces and the national fire service without any of the conditions capable of justifying such a derogation having been satisfied. On October 2, 2008, again the ECJ condemned Italy for its non-application of EC Public Procurement Directive. The ECJ contested the reasons invoked by Italy to justify the use of the negotiated procedure (instead of an open tender) and its justification that the conditions were met to allow it to procure helicopters under its National Decree. Italy claimed that the conditions set by Article 296 EC Treaty were fulfilled under its National Decree. The ECJ rejected this view, and concluded that the Italian government should have procured those helicopters, which are for civilian use and not intended specifically for military purposes, under the framework of the EC procurement law.

¹⁴⁰ Details and references on the three Italian cases were provided by Isabelle Maelcamp of the U.S. Mission to the EU. Case C-525/03 (ruled); see <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en&Submit=Rechercher&alldocs=alldocs&docj=docj&docop=docop&docor=docor&docjo=docjo&numaff=C-525/03&datefs=&datefe=&nomusuel=&domaine=&mots=&resmax=100>.

¹⁴¹ See *Commission of the European Communities vs. Italian Republic* (Judgment of the Court)(Case C-337/05)(April 8, 2008) (“ECJ Italian Helicopter Ruling”). Available at: <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=en&newform=newform&jurcdj=jurcdj&alldocrec=alldocrec&docj=docj&docor=docor&docop=docop&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=alldocnorec&docnoj=docnoj&docnoor=docnoor&typeord=ALLTYP&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&numaff=&ddatefs=&mdatefs=&ydatefs=&ddatefe=&mdatefe=04&ydatefe=2008&nomusuel=&domaine=&mots=agusta&resmax=100&Submit=Submit>.

¹⁴² Italian Helicopter Ruling, pp. 6-7.

These findings on Italy were noteworthy for a number of reasons. First, they reflect a clear intent of the ECJ, consistent with the judgment on Spain, to construe the ability of Member States to invoke Article 296 EC Treaty and other exceptions narrowly—confirming that Member States asserting such exemptions must meet a burden of proof. The Court basically took the view that allowing Member States to assert the exceptions without such a showing could allow the exceptions to undermine the very viability of Community law. Second, the Court’s rejection of the use of Article 296 EC Treaty for dual-use purchases also effectively narrows the scope of the exemption. Finally, viewed in totality, its rulings bring within the scope of EC competitive tendering rules types of awards that have long occurred without competition.

B. The Growing Role of the EC and ECJ in Defense Merger Reviews

One area that requires discussion is the role of the EU in reviewing proposed mergers and acquisitions in the European defense industry. Under the Treaty of Rome (and subsequent amendments), the European Commission has authority to review mergers and acquisitions, including defense and aerospace mergers, subject to its jurisdiction (determined by size of mergers and other criteria).¹⁴³

The European Commissioner for Competition (ECC—currently Neelie Kroes, viewed as an antitrust activist) and EC Directorate General for Competition exercise their authorities in accordance with two primary legislative texts: Council Regulation (EC) No. 139/2004 of January 20, 2004, on the Control of Concentrations Between Undertakings (the EC Merger Regulation), and Commission Regulation (EC) No. 802/2004 implementing Council Regulation (EC) No. 139/2004 (The “Implementing Regulation”).¹⁴⁴

The EU’s growing role in reviewing defense merger and acquisition activity must be understood in the context of the changing shape of the European defense industry and the overall evolving role of the EU. The EC always viewed commercial aerospace as a competitive international market and, hence, has long reviewed merger and acquisition in the aerospace sector under robust standards designed to maintain a competitive marketplace.

Like U.S. antitrust authorities, however, the EC recognized the defense industry as a special case. As discussed earlier in Part III, the Treaty of Rome left “essential interests of security,” including defense broadly, in the Member States’ national sphere of control. The EC thus historically adopted a cautious approach to mergers and acquisition reviews in defense markets, tending to defer to national authorities that sought reviews of consolidations under the Article 296 EC Treaty exemption (even in cases where the acquisition affected more than one Member State).

There are several important reasons for this. A central reason for the Commission’s somewhat laissez faire view through the 1990s was the compelling logic and support for

¹⁴³ Governing rules are set out in Treaty establishing the European Community (Nice consolidated version)—Part Three: Community policies—Title VI: Common rules on competition, taxation and approximation of laws—Chapter 1: Rules on competition—Section I: Rules applying to undertakings—Article 81—Article 85—EC Treaty (Maastricht consolidated version)—Article 85 EEC Treaty. See: http://ec.europa.eu/comm/competition/antitrust/overview_en.html.

¹⁴⁴ Legislation and Regulations governing EC merger reviews are available at: http://ec.europa.eu/comm/competition/mergers/legislation/regulations.html#merger_reg.

defense industrial consolidation within Europe.¹⁴⁵ As defense demand declined in Europe and national defense budgets declined in the post-Cold War era, the defense markets have been consolidating and nations revising their policies to adapt. National consolidations went forward first, and were generally approved under the auspices of national regulatory authorities. The EC's view of competition in military markets during that period is perhaps best summarized in the 1998 remarks of EU then Commissioner Karel Van Miert. He noted the proposal then under consideration for the merger of BAE Systems, Aerospatiale, and DASA into "a *single transnational company* with unified management, which would encompass the civil and military aircraft sectors of France, Germany and the UK," and "later would be extended to Italy, Spain and Sweden."¹⁴⁶ Subsequently, BAE turned away from this proposal in favor of its merger with GEC.

What is significant is Van Miert's view of such a merger:

How would such an operation be regarded as to its impact on competition? Recent cases... have shown that both Ministries of Defence (MoDs) and major European competitors seem to support the view that the consolidation of the European defence industry and to its strengthening *vis-à-vis* the powerful U.S. industry should be given priority, at this stage, on any considerations about restrictions of competition. In particular, in countries where a national producer exists, few objections against mergers are raised by the national MoDs, which benefit from their monopsonistic position. In other countries, MoDs are not particularly concerned either, provided that a sufficient level of competition is guaranteed by the availability of alternative supply. The opening-up of the national and European markets appears therefore to be a crucial issue to assess the competitive impact of any intensive concentrative process.

Another key factor, beyond the need to promote European consolidation, is also reflected in Van Miert's views and other precedents. Specifically, European defense markets have been largely national in nature (i.e., markets protected or insulated from foreign competition and sole source awards made to national firms by their MoDs). Hence, viewed in this context, a merger of a defense firm in one country (country A) with a company in another (country B) would have no real detrimental effect on competition in either country's defense market. Because the defense firm in country B did not compete in country A (it was essentially precluded), the merger would not result in any diminution in competition in country A.

Reflecting this logic, the Commission in practice found a distinction between "those countries where domestic suppliers exist, and where military customers wish to support those national suppliers and thereby the country's military independence, and those countries where there is no domestic supplier and where, subject to export restrictions and other barriers connected to national security, competition generally takes place worldwide

¹⁴⁵ Had authorities reviewed the BAE/GEC merger or several other European consolidations under U.S. antitrust laws, the outcome may have been different. BAE/GEC created a single UK defense firm that not only serviced most of demand in the UK at the prime level, but was also very vertically integrated—significantly limiting the competitive structure of the subtier supplier base and leaving new BAE in a position to foreclose subtier vendors through "make or buy" decisions. By way of analogy, this degree of vertical integration was rejected by the U.S. government in the Lockheed/Northrop Grumman merger.

¹⁴⁶ "The Transatlantic and global implications of European competition policy," Speech by Commissioner Karel Van Miert (North Atlantic Assembly Meeting—Palais Egmont, Brussels, Feb. 16, 1998).

amongst suppliers of different countries.”¹⁴⁷ In this regard, the Commission has tended to define those markets where domestic suppliers exist as national in scope (and protected) and those with no domestic suppliers as international (and open to foreign competition). It viewed the trend within Europe toward international armaments cooperation in procurement as insufficient to change its approach.¹⁴⁸ Thus, based on this logic, the Commission has been reluctant to challenge mergers where protected national markets are involved as it is more difficult to show that the merger would dilute competition.

A further basis for the Commission’s tolerance of concentration it would not have permitted in other sectors is that the buyers (the MoDs) generally voiced no objections to these mergers and had countervailing buying power, the firms often did not compete in their separate national markets, the firms did periodically partner anyway on various projects, and credible competitors existed (even though the markets in question were often closed).¹⁴⁹

Consistent with these views, through a series of cases, the Commission has allowed significant consolidation of the defense industry to occur in Europe—indeed, down to two or even a single competitor in numerous defense markets. These include, among others, the merger of the two leading European tactical missile firms (Matra BAE Dynamics and LFK, a subsidiary of DASA),¹⁵⁰ the two leading defense electronics firms (Thomson CSF (now Thales) and Racal),¹⁵¹ the creation of Astrium, a large satellite and space infrastructure firm with one significant European competitor for most projects,¹⁵² and ultimately, the creation of EADS from Aerospatiale and DASA (creating a dominant satellite manufacturer with prime platform capabilities in continental Europe).¹⁵³

In recent years, however, attitudes have changed and the role of the ECC and in turn the ECJ in defense merger and acquisition reviews has grown. As consolidation proceeded in the aerospace and defense sector, mergers increasingly came before the EU Commission. Former ECC Monti (1999-2004) expressed more interest in the defense sector, and resisted national efforts to invoke Article 296 EC Treaty and conduct national reviews of defense mergers. For example, the Commission did not succumb to French and British desires for a national, rather than EU, review of the Racal/Thompson merger.

As barriers to competition in national markets fall and foreign competitors enter previously protected defense markets, the Commission is likely to view these markets as more international in nature and treat them more under the traditional competition rules applicable to commercial aerospace—where it does not tolerate market dominance. Thus, as European markets become less domestic and protected (and allow more foreign competitors to enter), the role of the ECC and in turn the ECJ in defense merger and acquisition reviews

¹⁴⁷ European Union, Commission Competition Directorate, Merger Journal, Case No. Comp/M.1475—EADS, p. 22 (11/05/2000).

¹⁴⁸ Ibid.

¹⁴⁹ The Commission did require undertakings on some issues in these mergers; for example, where vertical issues arose because the merged supplier would control its competitor’s access to key parts and components. *Astrium Ruling*, p. 18.

¹⁵⁰ European Union, Commission Competition Directorate, Merger Journal, Case No. IV-M/945- Matra BAE Dynamics/DASA/LFK (27/01/98).

¹⁵¹ See “Commission clears the acquisition by Thomson-CSF of Racal.” EU Commission Press Release IP/ 00/628 (June 16, 2000).

¹⁵² European Union, Commission Competition Directorate, Merger Journal, Case No Comp/M.1636—MMS/DASA/ Astrium (21/03/2000) (“Astrium Ruling”).

¹⁵³ European Union, Commission Competition Directorate, Merger Journal, Case No Comp/M.1745-EADS (11/05/2000).

can be expected to grow (and the Commission's willingness to let countries rely on Article 296 EC Treaty to avoid ECC reviews diminish). The ECC can be expected to take a more robust view of the need for competition in the European market—in effect, using competition rules as the first line of defense to ensure a competitive market in this broader market.

C. EDA Achievements and Plans

The EDA, in existence for less than five years, also has put a fairly remarkable set of initiatives and products in motion. The EDA is one element of the intergovernmental ESDP Pillar of the EU sponsored by the Council. It has no competence to initiate binding laws such as the new Procurement Directives developed by the EC—which then get passed by the Council and the European Parliament.¹⁵⁴ Nevertheless, EDA has made progress as Member States have agreed to a series of concrete actions. In interviews with this study team, the EDA defined its “4 Major Achievements” to date, each of which is discussed in detail below:

- **Achievement 1:** Establishment of an active, functioning EDA as a collective tool and actor in EU defense industrial base and the broader defense and related markets.
- **Achievement 2:** Establishment of an intergovernmental regime on defense procurement—that is, a voluntary, intergovernmental code of conduct for open and transparent buying.
- **Achievement 3:** Establishment of Joint R&T Program, with joint funding and working bodies led by EDA.
- **Achievement 4:** Establishment of a European Capability Development Plan.

Achievement 1: Establishment of EDA, Articulation of Its Mission and Development of Organizational Capability. From a drawing board concept in 2001-2003, the EDA was established remarkably quickly and has become operational in short order. While still not large, the EDA has a clear set of missions, an organizational structure designed to achieve it, expert staffing from Member States and a number of ongoing initiatives.

The EDA was established pursuant to a Joint Action of the Council of Ministers on July 12, 2004, “to support the Member States and the Council in their effort to improve European defence capabilities in the field of crisis management and to sustain the European Security and Defence Policy as it stands now and develops in the future.”

To pursue this mission, EDA has developed four functional mission areas (each reflected in a separate directorate on the agency's organization).

- Developing defense capabilities;
- Promoting defense R&T;
- Promoting armaments cooperation;
- Creating a competitive European defense equipment market and strengthening the European defense, technological and industrial base.

¹⁵⁴ See: M. Trybus, “The new European Defense Agency: a contribution to a common European Security and Defense Policy or a challenge to the Community acquis?” (2006) 43 *Common Market Law Review*, pp. 667-703.

Developing an Integrated, Autonomous European Defense Industry. Of great relevance here, a primary mission for EDA is to build a European technological and defense industrial base that can serve to support the capability needs of ESDP. The first level goal is to develop a European defense technological and industrial base that is capability driven, competitive and competent. The EDA recognizes that this requires an industry that is more integrated, less duplicative and more interdependent, with closer integration with the non-defense industrial base. Significantly, the EDA vision also clearly includes a focus on European defense industrial autonomy. A PowerPoint presentation provided to the study team noted the desire for the European Defence Technological and Industrial Base (EDTIB) to have “less dependence on non-European sources for key defense technologies.”¹⁵⁵

Thus, the EDA has established a series of demand and supply “instruments” or subsidiary objectives designed to achieve these goals, including: the clarification of military capability needs and, as a derivative, the needs that industry must support; the consolidation of demand (more cooperative programs) and increased investment; the need to ensure security of supply; an increase in competition; and an increase and improvement in cooperation.

Achievement 2: The Intergovernmental Regime on Defense Procurement. As of this writing, 26 of the 27 Member States participating in EDA (all except Romania) agreed to adhere to the Code of Conduct in executing their defense procurements (not R&T). This voluntary intergovernmental regime, approved by EU defense ministers and managed by the EDA, was put in place in July 2006. Of interest, Norway, a non-EU member, has been allowed to join the regime. While not an EU member, Norway participates in ESDP in numerous ways and contributes troops to EU operations. The participation of a non-EU member suggests some openness to other non-EU nations joining in the future. At this writing, there is no sense that participation extends beyond Europe.

The Code of Conduct, which commits Member States to more open cross-border competition for defense contracts, is based on prior arrangements established under the six-nation Framework Agreement. As the EDA noted in announcing the Code:

“For the first time ever, European countries have committed to procure defence equipment from each other if the offer is the best available, instead of automatically contracting with a national supplier,” said Javier Solana, Chief of ESDP. “It covers defence equipment purchases which governments choose to exempt from EU public procurement rules under Article 296 of the EC Treaty and which therefore usually do not involve any cross-border competition.”¹⁵⁶

The core principles of the Code of Conduct are as follows:

- **A voluntary, non-binding approach.** Not a legal commitment, but a commitment to work toward more open markets.
- **Fair and equal treatment of suppliers.** A single portal for buying announcements. In conducting competition, fair and equal treatment will be assured by use of:
 - **Selection criteria.** All companies will be evaluated on the basis of transparent and objective standards—possessing a security clearance, required know-how, etc.;

¹⁵⁵ “EDA’s initiatives in the field of Defence Procurement and Defence Industry,” EDA Presentation to Study Team (January 2008).

¹⁵⁶ EDA Press release June 30, 2006, “Birth of the European Defense Equipment Market.”

- **Specifications and statements of requirements.** Such requirements shall be formulated in terms of function and performance. International standards will, wherever possible, be included in specifications rather than national ones or specific company-linked requirements;
- **Award criteria.** The fundamental criterion for selecting a contractor will be the most economically advantageous solution for the particular requirement, taking into account considerations of costs (both acquisition and life cycle), compliance, quality and security of supply and offsets; and
- **Debriefing.** All unsuccessful bidders to be given feedback upon request after contract award.
- **Mutual transparency and accountability, mutual support and mutual benefit.** The Code includes a robust reporting and monitoring system in order to gain the confidence that the regime is working as intended.

The Electronic Bulletin Board. To implement the single portal for buying, EDA established electronic bulletin boards (EBBs) for nations to post procurements and bidding opportunities. EBB1 allows nations to post potential competitive opportunities of all Article 296 related public procurements of the participating EU Member States. That is, these are the products and services that are by definition defense or security related. By posting these buys, the EDA hopes to encourage more cross-European bidding and buying, and to generally increase more transparency of defense buying and competition in the EU community. The aim is reducing the use of Article 296 over time.

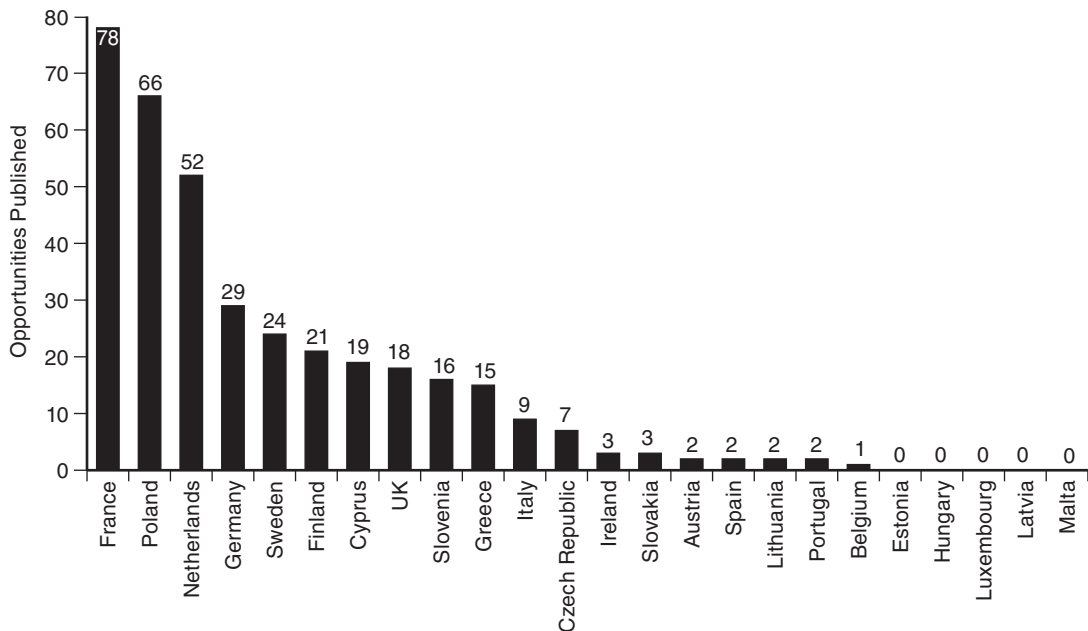
EDA's statistics (see Figure 57, below) show that the EBB is increasingly used and is having an impact:

- About 10 billion Euros of buys were published on the EBB1 (296 buys)
- About 26 percent of all opportunities posted have international (non-domestics) bids;
- 1/3 of the procurements with international bids were awarded to a non-domestic EU source, 1/3 to non-EU source and 1/3 to a national source.
- France and Poland currently lead in using the EBB, as shown on Figure 57 below.

EDA is realistic in its expectations. It recognizes the prevailing pattern of using Article 296 to limit buys nationally will continue, especially among some Member States. Over time, however, EDA officials believe the increase in buying transparency will encourage governments, and firms, to better understand what is being bought across the EU—slowly leading to more interchange.

Transparency also allows EDA to challenge the questionable use of Article 296 EC Treaty. For example, EDA representatives reported challenging a Finnish buy of boots for military use that was not being competed, justified under Article 296 as an “essential security” matter.

EDA Code of Best Practice in the Supply Chain; the Subcontractor EBB. This Code is designed to bring competition into the supply chain below the level of large systems. In 2007, EDA initiated an “EBB2” that represents supplier opportunities, that is, for primes seeking subcontractors. This subcontractor bulletin board may be particularly helpful as small and medium-size enterprises have a hard time reaching into cross-border

Figure 57 Contract Opportunities Published on the Electronic Bulletin Board

Source: European Defence Agency.

markets. More than 41 companies have to date registered with EBB2 and 33 companies have published opportunities.

Security of Supply and Security of Information. On September 20, 2006, the EDA Steering Board implemented new elements for *Security of Supply and Security of Information* across national borders. Member States subscribing to the regime have committed to try to meet requests from fellow Member States for goods and services during an emergency, crisis or armed conflict, including from their own stocks if necessary. The Security of Supply approach again embodies some elements of the earlier LOI Security of Supply Implementing Arrangement. However, it does not include the LOI features by which member governments agreed to a binding approach, and effectively agreed to flow down these requirements to their contractors (enforced through contractual provisions and agreements with industry associations). The Member States also agreed on rules governing the security of classified and commercially sensitive information relating to defense procurement.¹⁵⁷

New EDA Code of Conduct on Offsets. EDA officials state flatly there should be no offsets, but recognize that offsets in some form are a current reality across Europe. They have been investigating offsets to identify those practices most harmful to competition and the EDTIB but have had difficulty gathering meaningful data. While some Member States might support ending offsets (notably the UK), other Member States (especially newer EU

¹⁵⁷ For full details on the EDA Code of Conduct and other procurement elements see: <http://www.eda.europa.eu/>.

members) remain very supportive of these distortive practices. In 2007, EDA conducted a Study on Offsets in the Member States.¹⁵⁸

On October 24, 2008, the EDA issued a new voluntary Code of Conduct on Offsets to evolve toward more transparent use of offsets that can also help shape the EDTIB, while reducing reliance on them. This move is based on a philosophy similar to the one that EDA is using to address use of Article 296: that is, first work toward transparency and a process of voluntary participation. The EDA outlines the new Code of Conduct on Offsets as follows:

[T]he Code applies to all compensation practices required as a condition of purchase or resulting from a purchase of defense goods or defense services and will take effect from 1 July 2009. “This a breakthrough decision and a first step in dealing with a very complex issue, knowing that offset is not the only market distortion. We are therefore in parallel working towards the creation of market conditions and a European industry in which offsets may no longer be needed. But, considering the present structure of the European industry and that our market opening efforts are still in their beginning, we need for the short term to focus, on evolving offsets, whilst starting to mitigate the adverse impact they have on cross-border competition.” said Alexander Weis, the EDA Chief Executive. Member States subscribing to the Code will neither require nor accept offsets exceeding the value of the procurement contract. Recognizing also the need to adjust national policies to this provision, National Armament Directors agreed to defer the application of the 100 percent ceiling until 15 October 2010.¹⁵⁹

The Code of Conduct on Offsets also sets out a framework for increased transparency on national offset practices and policies, and for using offset to help develop industrial capabilities that are capability-driven, world-class competent and globally competitive.

Achievement 3: An EU R&T Framework

EDA has helped develop a framework for an EU R&T methodology. Specifically, EDA has established a working group to develop a list of key R&T areas of common interest, assess priorities and investigate combining or harmonizing them. A key point is that the starting point of the R&T effort is the identification of Member State *national* needs, not jointly formed EU needs.

Their goal is to identify and work cooperatively on areas of strong common need and resources, and the end result can be shared or harmonized investments and R&T work in a model they term the Joint Investment Program (JIP). EDA’s goal is to have 5 or 6 EU JIPs in place at a given time.

There are two areas currently employing the JIP model:

- **Force Protection JIP**—\$55M, 3 years, with funds from 19 Member States. Four rounds of calls for proposals are underway with hundreds of firms responding. EDA

¹⁵⁸ E.A. Eriksson, M. Axelson, K. Hartley, M. Mason, A.S. Stenérus, and M. Trybus, *Study on the Effects of Offsets on the Development of a European Defense Industry and Market* (SCS Henley on Thames and FOI Stockholm for the EDA Brussels, 2007), see: <http://www.eda.europa.eu/documents.aspx>.

¹⁵⁹ EDA Press Release, “EU governments agree voluntary Code of Conduct on Offsets,” Oct. 24, 2008, available at: <http://www.eda.europa.eu/newsitem.aspx?id=420>.

is coordinating activities with cross-national Integrated Project Teams performing the work.

- **Disruptive Battlefield JIP.** On May 26, 2008, the EDA’s Steering Board approved a new two-year program for research into emerging technologies that might have a disruptive effect on the battlefield. Eleven Member States will contribute; it will be funded by a common budget of €15.5 million.

One issue concerning the JIPs is how to meet Member State needs to retain IP rights and the benefit of resources spent on common programs. Member States want to see technology gains back in their firms, in their nations. EDA is proposing to operate JIPs with a concept of “global modified *juste retour*”—meaning not direct work back for a specific type of investment, but overall work back into Member States *balanced* to funds contributed by Member States over time. This reflects a desire to reduce the inefficiency of joint programs, and to try to select particular firms on the basis of competence rather than nationality. However, there will not be open competition as such in these programs. In this regard, it should be recognized that these and other R&T programs would likely not fall within the new EC Defense Procurement Directive because it excludes cooperative development.

It also should be recognized that the JIP model is apparently for Europe only—there is no indication that non-European nations or entities will be allowed to participate.

Achievement 4: European Capability Development Plan

In 2006, EDA articulated an overall “long-term vision” of European defense capability needs to support ESDP focused on the need for expeditionary, multinational and civil/military operations that relies heavily on knowledge exploitation.¹⁶⁰

Subsequently, over an 18-month period, EDA established an ESDP Capability Development Plan (ECDP), based on the long-term vision and existing EU Headline goals, by a more detailed and evidence-based analysis of future capability needs and the mutual disclosure of national medium-to-long term planning. The focus of the ECDP was to: make the “long-term vision” capability guidance more specific and useful; to identify priorities for capability development; and to bring out opportunities to pool and cooperate.

A core strand of the effort was to establish the baseline of shortfalls against the Headline Goal 2010 and their relative priority (in essence to identify capability gaps between projected capability requirements and existing capabilities, *vis-à-vis* existing national and cooperative programs in Member States). It also involved collating a database of Member States’ current defense plans and programs and harvesting lessons for future capabilities from current experience. A key and noteworthy part of the work is that the Armaments Directors from EU Member States worked jointly and cooperatively with EDA on a sustained basis to prepare the report.

In July 2008, the initial ECDP was presented to the EDA’s Steering Board and endorsed by EU governments, which agreed to use it to guide future national defense investment decisions and to seek opportunities to collaborate so as to address their short-to-longer-term military requirements coherently. Based on the ECDP, the EDA’s Steering Board

¹⁶⁰ “An Initial Long-Term Vision for European Defence Capability and Capacity Needs,” EDA (October 2006). Available at: <http://www.eda.europa.eu/genericitem.aspx?id=146>.

agreed on 12 topics for specific action—such as countermeasures against improvised explosive devices, computer network defense and medical support—and asked the EDA to prepare a detailed way forward for each set of priorities.

Certainly, the development of the ECDP is a key element of the EDA's work to be applauded. It addresses, in the EDA's own words, the "well-documented fragmentation in demand for European military capabilities, caused in part by a lack of coordinated military requirements and comprehensive priorities"

Yet, the ECDP effort has inherent limitations and it is too early to evaluate its implications for the future—it is at best a point in the process. First, ECDP does not create a set of EU requirements that replace national requirements—although it is a gradual step in that direction. As Javier Solana, Head of the Agency, made clear, the ECDP "is not a supranational military equipment or capability plan which aims to replace national defence plans and programmes. It should support, not replace national decision-making," he added. Second, this is not the first time European governments have identified capabilities shortfalls. In both the Prague Capabilities Commitment and Headline Goals, these nations have done this in a detailed way and simply failed to follow through and execute most of these commitments. Thus, it remains to be seen whether this more limited list of specific action steps—which again requires further planning and detailed analysis by EDA prior to execution—will be effectuated.

Additional EDA Initiatives in Process: European Industrial Base Strategy

Finally, as part of its overall mission, EDA has other key initiatives in the works. A key one for this study is the development of a detailed *European defense industrial base strategy*.¹⁶¹ This full strategy, when issued, will focus on evaluating and identifying measures to strengthen the overall European defense technology and industrial base. Undoubtedly, this effort will focus on determining whether and to what extent the EU has the defense industrial capabilities needed to execute the fresh-off-the-press EDCP and what steps should be taken to facilitate the development of needed industrial capabilities for this effort.

This type of EU-wide effort parallels the national defense industrial base strategies that have emerged in the UK, France, Germany, Sweden and elsewhere. As this effort at creating a European defense industrial base strategy takes hold, it may pose challenges and conflicts *vis-à-vis* these national efforts (for example, in terms of considerations like seeking to have "noble"—that is, desirable high value—work done onshore on key programs).

The EDA also initiated a new *Study on State Aid and Ownership of Firms*, in early 2008. While there is a long legacy of state aid and ownership in European defense companies and capabilities, the EU Commission and EDA recognize this as an aberration to normal competitive market operations. This study might offer insight and comparisons among nations and industry sectors that would be useful in ongoing initiatives for change.

¹⁶¹ The EDA released a top-level strategy statement in 2007. See EDA, "A STRATEGY FOR THE EUROPEAN DEFENCE TECHNOLOGICAL AND INDUSTRIAL BASE," (May 14 2007 Brussels, Belgium). Available at: <http://www.eda.europa.eu/genericitem.aspx?area=Organisation&id=211>.

D. New EU Common Rules on Control of Arms Exports¹⁶²

In late 2008, the EU also moved to strengthen its rules governing the export of conventional arms outside the EU’s territory. Specifically, on December 8, 2008, the Council of EU Foreign Affairs Ministers approved a “Common Position” *making the 1998 EU Code of Conduct on Arms Exports legally binding*. This Common Position was effective immediately upon its adoption.

Under these rules, every request for an arms export license for an item referenced in the EU Common Military List will have to be assessed according to the eight criteria outlined in the new Common Rules. The most significant criteria (the first one) states that an arms export must be denied if it is inconsistent with EU Member States’ commitments to enforce arms embargoes by United Nations, EU and the Organization for Security and Cooperation in Europe. The new Common Rules also create a mechanism for Member States to consult and inform each other about denials of arms export licenses. The new Common Rules will only concern exports of military items *outside* the EU.

A “Common Position.” The legal instrument chosen for the new Common Rules is a “Common Position” under CFSP (*Common Foreign Security Policy*), based on Article 15 of the EU Treaty. Article 15 provides that Member States “shall ensure that their national policies conform to the Common Positions.” In other words, Member States are required by the Treaty to comply with and uphold such Positions that have been adopted unanimously at the Council level. They involve a commitment by the Union as a whole as well as by the individual Member States. They are part of the EU body of law (the “*Acquis Communautaire*”). There is no role for the EC or the European Court of Justice here, since those activities are under the “Second Pillar” (Title V of the EU Treaty).

Therefore, the prerogative of issuing but also denying export licenses is and remains in the hands of the Member States. However, and importantly, the Member States are bound to act in accordance with the principles of the new Common Position.

Effects and Implications. The new Common Rules complement the newly adopted EC Directive on Intra-EC Transfers of Defense Equipment and Technology, which are described in detail in Part E, below (the “New EC Defense Package”). The new Directive on Intra-EC Transfers will regulate the transfers between EU Member States (*inside* the EU). The combination of two new rules to govern both internal transfers and external exports aim at creating common rules for a more coherent and harmonized European defense industrial base; however, both rules have different legal basis and different enforcement mechanisms.

With these combined new export control policies, the EU hopes to have a better alignment of policies of EU Member States for the consistent and common application of arms embargoes and other international export restrictions. If these rules are effectively enforced by Member States, the EU zone in time could become a more secure transit area for military equipment, both within the EU and in terms of re-exports outside the EU.

The movement of U.S. International Traffic in Arms Regulations (ITAR) controlled components within the EU could be affected by this new framework. On the potentially

¹⁶² Significant input for this section came from Isabelle Maelcamp, DoC Commercial Specialist, U.S. Mission to the EU. For more details See: Council Common Position 2008/944/CSFP, EU Official Journal (Dec. 13, 2008). Available at: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:335:0099:0103:EN:PDF>.

positive side, these new Common Rules for export outside the EU could help provide a solution for U.S. concerns about varying country policies and lack of effective re-export controls. It might even, in time, serve as a basis for a future U.S. license exemption or special “one-stop shopping” license for EU countries—at least for some level of less sensitive parts and components that are currently controlled under the ITAR. Such an exemption would prove helpful for smaller and medium size U.S. suppliers seeking to sell in Europe.

However, given that Member States retain the ability to issue and deny export licenses within their own processes and authorities, it remains to be seen how much the new Common Position will effectively create a new and more strictly enforced regime EU-wide. Notably, there are no specific policies on end-use control in the Rules. Those controls will continue to be determined by each Member State, which means there will always be some areas where controls are likely weaker than others.

E. The New EC Defense Package

Perhaps the centerpiece of the EU’s efforts to create a single European defense market is a new EC “Defense Package” of directives—the EC Defense Procurement Directive and the EC Defense Transfers Directive—that has now been approved by the European Parliament after extensive negotiations and is expected to be finally enacted in 2009 by the European Council of Ministers. We discuss in depth below the key elements of the new Package, the core issues they raise, and their likely trajectory and impact for the United States.

The Procurement Directive: Tailored to Defense and Security Markets

The new EC Defense Procurement Directive (the Procurement Directive) applies the basic market principles of the EU’s existing public procurement directive, including transparency and competitive bidding requirements, to defense and homeland security markets.¹⁶³ Specifically, the EC Defence Procurement Directive applies to contracts for supplies (equipment), works (building or civil engineering projects) and services relating to military and “sensitive” (i.e., homeland security) equipment, across the life cycle, that meet certain specified monetary thresholds. But the Directive recognizes the unique and sensitive nature of these markets and, hence, affords more flexibility to contracting authorities and also provides safeguards designed to ensure the security of information and supply.

The key features of the new Directive are as follows:

- **Scope of Covered Acquisitions: From R&D to Procurement.** Subject to certain exceptions discussed below, the EC Defence Procurement Directive broadly covers the full “life cycle”—i.e., “all possible successive stages of products”—from specified aspects of R&D to production to the aftermarket (upgrades, maintenance, logistics and training). This includes what the U.S. Department of Defense (DoD) would call all phases of Science and Technology development, including demonstrations. However, the Directive language describes two major developmental phase

¹⁶³ The Procurement Directive is formally entitled the “European Parliament legislative resolution of Jan. 14, 2009 on the proposal for a directive of the European Parliament and of the Council on the coordination of procedures for the award of certain public works contracts, public supply contracts and public service contracts in the fields of defence and security (COM(2007)0766—C6-0467/2007—2007/0280(COD)).” Available at: <http://www.europarl.europa.eu/sidesSearch/sipadeMapUrl.do?PROG=TA&language=EN&startValue=10>.

exceptions, that is, areas outside its scope: 1) R&D in the Directive’s definition does not include “the making and qualification of pre-production prototypes, tools and industrial engineering, industrial design or manufacture”;¹⁶⁴ and 2) production work where previous development stages have been awarded with follow-on contract options for production in accordance with the Directive’s procurement procedures. In these cases, the follow-on phases do not have to be tendered again. This last exclusion has been an issue to many Member States, particularly the UK, and may cause some Member States to seek Article 296 exemptions, discussed below.

- **Scope of Goods and Services: Defense and Elements of Civil (Homeland) Security.** The EC Defense Procurement Directive covers both defense (military) and “sensitive” or homeland security equipment. Concerning defense products, the Directive relies on a broad and rather vague 1958 list of military goods that includes arms, munitions and war materials. Many product areas—such as unmanned aerial vehicles and intelligence, surveillance and reconnaissance—have developed since this 1958 list was created. EC officials understand that this existing list is imperfect; it was used to avoid a detailed, time-consuming exercise of creating a new twenty-first century list. The Directive invokes the 1958 list, observing that it is generic enough to cover defense articles and directing that the list be interpreted broadly.¹⁶⁵ The EC could make revisions to this list at a later point. The Directive scope also expressly covers products that, although initially designed for civilian use, were later adapted to military purposes to be used as arms, munitions or war material. Finally, the Directive includes “sensitive” equipment, works and services that have features similar to defense procurements and are for “security purposes” because these procurements are not deemed suitable for the existing EC Public Procurement Directive. The Directive also expressly applies to procurements where military and non-military forces may cooperate—e.g., border protection or crisis management.
- **Procedures: Publication and Competition.** The Directive affords the given contracting authority the discretion to use one of several methodologies for competitively bidding a contract, including: the negotiated procedure (effectively the “default” approach for contracting, it calls for publication of the contract notice setting forth the requirements); the competitive dialogue, for use when a contract is more complex in nature and requires opening a dialogue with certain bidders selected for dialogue in accordance with criteria in the Directive; and the restricted procedure, where contracts can be awarded without prior publication of a contract notice in certain circumstances (e.g., where publication is incompatible with the urgency of a crisis or armed conflict, for follow-on orders, etc.). In all events, the contracting authority must ensure equal treatment of all tenders and not provide information in a discriminatory manner that affords some bidders an advantage over others.
- **Subcontracts.** The new Directive establishes that bidders are free to select subcontractors but may not be required (by a contracting authority) to discriminate against potential subcontractors on the basis of nationality. As the preamble confirms, “[p]otential subcontractors should not be discriminated against on the grounds

¹⁶⁴ EC Defense Procurement Directive, op. cit., p. 3 (Preamble).

¹⁶⁵ That has also been the judgment of some academics. See M. Trybus, On the list under Art. 296, 12 Public Procurement Law Review, NA, pp. 15-21.

of nationality,” and “it can be appropriate for contracting authorities/entities to oblige the successful tenderer to organize a transparent and non-discriminatory competition when awarding subcontracts to third parties.”¹⁶⁶ This important rule, essentially designed to flow down the top-level requirements of the Directive to the subcontract level, means that national procurement authorities cannot require a prime contractor to utilize local subcontractors—in effect, limiting the ability of the procurement authority to demand direct offsets on its programs through subcontracts. Further, Member States may require that the successful tenderer subcontract to third parties a share of the contract—a maximum percentage of the value, not to exceed 30 percent. This provision tends to protect the independent subsystem supplier base as it would allow Member States’ contracting authorities to prevent prime level bidders, for example, from performing the full value of a large contract through its own in-house businesses.

- **Security of Supply.** Special provisions allow Member States to establish specific contractual requirements and eligibility criteria for contractors in order to protect its security of supply for sensitive contracts. Among other things, this includes requiring bidders to submit some certification or documentation demonstrating that it would be able to honor its obligations regarding the export of goods associated with the contract. The bidder could also be required to provide supporting documentation about its supply chain, and documentation from the bidder’s national authorities regarding fulfillment of needs in time of crisis. Additionally, bidders could be required to provide information about any “restriction” regarding disclosure transfer or use of the products and services or “any result of those products and services” that “would result from export control or security arrangements.”
- **Security of Information.** The Directive recognizes that there is no EU-wide regime on security of information that allows for the mutual recognition of national security clearances and the exchange of classified information between Member States and firms, and notes that such a regime “would be particularly useful.” However, in the absence of such a regime, it allows Member States to utilize safeguards that protect classified and other sensitive information in defense and security contracts in the bidding process, selection criteria and post-award contractual requirements. In particular, Member States’ contracting authority are authorized to specify in the contract documentation (tenders, etc.) requirements that must be fulfilled to ensure the “requisite level” of security of information, and to require that the bidder and its subcontractors submit commitments on confidentiality and information that enables the procuring authority to determine whether that bidder possesses the capability to protect the confidentiality of sensitive information.
- **Technical Specifications.** The Directive requires that such specifications be set out in contract documentation, shall afford equal access for bidders and shall not “have the effect of creating unjustified obstacles to the opening up of public procurement to competition.”¹⁶⁷ Toward this end, the Directive requires that technical specifications be drawn up using existing standards (with a hierarchy of standards favoring, in order of priority, 1) national civil standards transposing European standards, 2) European standards, and 3) international standards).

¹⁶⁶ EC Defense Procurement Directive, op. cit., pp. 9-10 (Preamble).

¹⁶⁷ EC Defense Procurement Directive, op. cit., Art. 10.2, p. 35.

- **Rules on Transparency.** The Directive contains numerous rules to ensure non-discrimination and open and fair bidding processes, covering such matters as: 1) the publication of contract notices (form and manner); 2) time limits for receipt of requests to participate and receipt of tenders; 3) means of communication with bidders; 4) conduct of the bidding procedure; 5) criteria for selection of bidders (e.g., exclusion from participation of candidates with certain prior criminal convictions, who have declared bankruptcy), required proof of economic, financial and technical capability to perform tenders can be requested; and 6) rules concerning the selection criteria.
- **Authorization for Centralized Purchasing.** The Directive recognizes that centralized purchasing by the EU and its Member States could increase competition and streamline purchasing. It therefore authorizes EU Member State contracting authorities and European bodies such as EDA the ability to act as a central purchaser provided that such purchasing complies with the Directive.
- **Exclusions and Exemptions.** The Directive expressly creates a number of exclusions from its application, including: 1) contracts for intelligence activities; 2) contracts that would require the disclosure of information that a Member State views as contrary to its essential security; 3) cooperative contracts with third countries or under OCCAR or NATO; 4) contracts governed by specific procedural rules pursuant to international agreements or arrangements between Member States and third countries or such rules established by international organization engaged in purchasing; or 5) various other extraordinary circumstances.¹⁶⁸ As the preamble to the Directive states, there may be contracts in defense or security “which necessitate so extremely demanding security of supply requirements or which are so confidential and/or important for national sovereignty that even the specific provisions of this Directive are not sufficient to safeguard Member States’ essential security interests, the definition of which is the sole responsibility of Member States.” Countries thus can invoke these exclusions for a particular contract and operate under Article 296. However, the preamble to the Directive also makes clear that the “recourse to such exceptions should be interpreted in such a way that their effects do not extend beyond that which is strictly necessary for the protection of the legitimate interests of Member States.”
- **Availability of Review Procedures.** Finally, the Directive requires that Member States afford interested private parties (e.g., disappointed bidders) the right to obtain a review of the decisions of national procurement authorities to ensure that they comply with the Directive and national laws incorporating the Directive’s obligations. This includes the ability to challenge the award procedure before the contract is signed in order to ensure compliance with key EU transparency and competition obligations.” At the same time, the Directive allows Member States the flexibility to “take into account the protection of defence and security interests” in structuring review procedures, selecting interim measures during the pendency of the review and choosing penalties.

¹⁶⁸ EC Defense Procurement Directive, Art. 8, pp. 32-33.

*Defense Transfers Directive: An Effort to Simplify Licensing*¹⁶⁹

The new EC Directive on transfers of defense-related products within the European Union (EC Transfers Directive) is designed to address the existing fragmentation created by 27 national regimes. As the Directive's preamble notes, "the laws, regulations and administrative measures in Member States... contain disparities which may impede the free movement of defense-related products within the Community and may distort competition within the internal market, hampering innovation, industrial cooperation and the competitiveness of the defense industry in the EU."¹⁷⁰ Indeed, for intra-EU transfers today, about 13,000 national licenses are required each year. This drives significant time, cost and complexity in the EU supply chain. For example, simply sending a component from one work level to another within one company—from EADs France to EADS Germany—requires international license time and work.¹⁷¹ The EU concluded that these burdens and security of supply risks were an impediment to industrial competitiveness and the emergence of a European defense equipment market.

The EC Transfers Directive thus is expressly designed to create an improved and simplified regulatory environment for intra-European defense transfers that both strengthens the European defense industry's competitiveness and improves security of supply of European defense products. The Directive seeks to accomplish these goals by creating broader and less burdensome internal export license mechanisms while maintaining clear, strong controls at EU external frontiers. As there have been numerous new member accessions to the EU in recent years, establishing a legal structure on transfers also will help level up and harmonize the various national practices. At the same time, the EC Transfers Directive's language underscores that it is for the harmonization of transfers of defense-related goods only—it does not affect or alter the specific transfer (export control) policies of Member States.

The centerpiece of the EC Transfers Directive is the requirement that Member States establish and permit the use of broader, more flexibility "Global" and "General" licenses for transfers within the EU—and require the use of "Individual" licenses for single exports only in exceptional circumstances. Specifically, the Directive requires that Member States establish three types of licenses, and a company certification requirement:

- **Global transfer licenses**, which must be approved in advance, for multiple transfers of multiple products to multiple EU recipients;
- **General transfer licenses**, which would be published and exist as a matter of law (i.e., without the need for individual approvals), for low risk transfers of industrial and military purchases to recipient firms in EU Member States which are "certified" under procedures set forth in the Directive;
- **Individual transfer licenses**, the traditional approach used whereby individual exports are approved in advance, with certain conditions, only where necessary in exceptional circumstances; and
- **Company certification**, viewed as the underlying cement that will allow trust to be built between certifying and licensing authorities of different EU Member States.

¹⁶⁹ European Parliament legislative resolution of Dec. 16, 2008, on the proposal for a directive of the European Parliament and of the Council on simplifying terms and conditions of transfers of defence-related products within the Community (COM(2007)0765—C6-0468/2007—2007/0279(COD)). This is available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2008-0603+0+DOC+XML+V0//EN>.

¹⁷⁰ EC Transfers Directive, *Ibid.*, p. 2.

¹⁷¹ Information cited is from interviews with EC representatives.

The EC Defense Package: Status, Likely Trajectory and Potential Impact

1. Both Directives Have Been Approved by the European Parliament and Are Likely to be Formally Enacted in 2009. Member States can be expected to implement them within the subsequent 18-24 months.¹⁷² There is a near unanimous view from representatives of the European Parliament, the EC, the national governments, industry, informed media and other observers interviewed for this study that the Directives will be enacted. For all of the reasons discussed herein, after years of slow progress, there now appears to be political will to move forward to implement this ESDP-related agenda and strengthen the European defense technology and industry. Further, this package of new Directives has been carefully assembled and pre-vetted with various European constituencies, including the European Parliament and individual Member States.

The French Presidency of the EU, which ended on December 31, 2008, worked to expedite the new Directives' enactment. Its efforts paid off. On December 16, 2008, and January 14, 2009, respectively, the EC Transfers Directive and the EC Defense Procurement Directive were approved by the European Parliament in European Parliament/European Commission "Amended Directive" versions. The Parliamentary action followed an extensive coordination process on the defense package within the EU. In this "Trialogue" phase encouraged by the French Presidency, the Parliament, the Commission and the Council met regularly to draft the final version of the new Directives and address politically delicate issues; amendments were made to reflect a consensus of the members of the European Parliament and the Member States. The amendments were substantive in nature; the scope of the Directives was expanded to cover some aspects of R&D (it initially only applied to production), entirely new provisions were added (various exclusions and the subcontracting requirements, for example), and a variety of other sections (security of supply and security of information) were significantly amended.

The package now awaits approval by the European Union Council of Ministers (of the Member States) and the Directives could be finally enacted sometime in mid-to-late 2009. Of course, even assuming the Directives are enacted in 2009, they still must be implemented by each Member State, which must enact them into national laws and regulations. Member States have 18 months to implement the EC Defense Procurement Directive and 24 months to implement the EC Transfers Directive.¹⁷³ There also is the prospect that Member States will not meet these timelines for compliance. Based on the experience of the recent implementation of the EC Public Procurement Directive 2004/18/EC into the national laws of Member States, many Member States will be late, and in some cases possibly very late, in implementation.¹⁷⁴

¹⁷² The EC Defense Procurement Directive is required to be implemented within 18 months. The EC Transfers Directive allows Member States a longer period, considered a trial period to foster trust, before implementing the Transfers Directive.

¹⁷³ As noted earlier, there have been amendments to the Transfers Directive that would allow Member States 24 months to implement the EC Transfers Directive. The Transfers Directive states this extra time is to allow some time for the Transfers Directive to be in use and foster mutual trust, and then for there to be evaluation of it before Member States implement its provisions into national laws and regulations (p. 5).

¹⁷⁴ The majority of the Member States had not implemented the 2004/18/EC Directive by the January 2006 deadline and some Member States were more than a year late. See M. Trybus and T. Medina, "Unfinished Business: The State of Implementation of the New EC Public Procurement Directives in the Member States on Feb. 1, 2007," *Public Procurement Law Review* NA 89-97 (2007), and M. Trybus, "The Morning After the Deadline: the State of Implementation of the new EC Public Procurement Directives in the Member States on Feb. 1, 2006," 15 *Public Procurement Law Review* NA 82-90 (2006).

2. The Directives, Once Enacted, Will Be Legally Binding on Member States and Will Likely Encourage Their Compliance. The European Commission's decision to adopt directives must be viewed in context. In this regard, the European Commission has the ability to take a continuum of authoritative and legally meaningful actions, including:

- A Regulation, which is directly applicable to Member States and their citizens and has the force and effect of law;
- A Directive, which, once issued finally, is legally binding on Member States—which must implement it through national legislation; and
- A Decision, which is directly binding only for those to whom it is addressed.

In the case of defense procurement and transfers, the Commission decided to issue two Directives. According to Article 249 of the EC Treaty, Directives are binding on the Member States *as to results to be achieved*, but leave the choice of form and method to the Member States; they have the duty to comply with the new Directives by implementing them in their national legal systems. In other words, the new Directives eventually become national laws and regulations of the Member States. Directives are unique to the EU but to a certain extent they resemble the ratification of international treaties in most countries.

Thus, as a choice of forms, an EC Directive is less forceful than an EU regulation—it is not immediately applicable without implementing actions by Member States. And, as noted, above, in practice, Member States often take several years to comply with directives. However, the EU has always used directives for public procurements, as the vast majority of such procurements is carried out by national authorities and so must be integrated into national laws and practices. In implementing EC Directives into national laws and regulations, there is some freedom of “interpretation” by Member States’ regulatory authorities; they are allowed to add “implementation details” as they transpose the Directive into national law. Nevertheless, Member States’ leeway is not unlimited. If Member States fail to adopt portions of the Directives, or fail to adopt them in a manner consistent with the general spirit of the Directives, the Commission can request a judicial review from the ECJ.

By leaving implementation to Member States, there is some risk that Member States may construe the Directives narrowly. Indeed, some European governments and firms have expressed concern that nations would differentially apply them. For example, the defense industry representatives in one northern European country expressed concern to this study team that their government would fairly apply the Directive (they are “good EU citizens”) but that other governments would be less faithful in applying it—resulting in a more open market for their foreign competitors at home while continuing to shut them out of other European markets still closed to them.

The new Directives thus are a middle-ground compromise solution that brings the defense procurement market into a legal framework while giving Member States some freedom of interpretation of the Directive. This in good part reflects the desire of Member States to retain national control over these sensitive areas close to national security and their reluctance to cede authority to the Brussels bureaucracy. In the case of the EC Procurement Directive, there was already the precedent set to utilize the directive mechanism with respect to civil procurement. In the case of the EC Transfers Directive, it is notable that the EC initially sought to use a Regulation to create a legal tool. However, the EU encountered national resistance and it was forced to scale back its ambitions. Hence, the use of a Directive still leaves in place 27 different licensing regimes.

Member States’ Issues With the New Directive: Exemptions, the Nexus to Offsets, and Follow-On Contracts. Some Member States sought to include a special “exemption” in the EC Defence Procurement Directive that would directly allow them to avoid the Directive’s competition requirements without having to seek recourse to Article 296. This reflects not only a concern that the new Directives will inhibit their full freedom to limit procurements to chosen sources, but will also make it impossible to require offsets as part of their procurement decisions—a requirement that is otherwise not provided for. Also, in countries like the UK, there was a concern over the need to compete follow-on production contracts where initial R&D contracts were awarded competitively—a very typical approach.

- **Offsets.** The offset issue is particularly complex. While offsets are not directly addressed in the Directive, it is difficult to see how contracts that are awarded in compliance within the Directive can be subject to offsets. Specifically, under the Directive, procurements undertaken in accordance with its rules must be awarded based on the criteria set forth in Articles 37 and 38—which do not include offsets among the factors for consideration. Further, as noted above, direct offsets—through the use of local subcontractors—also will prove difficult given the clear rule that national authorities cannot require a prime to use local subcontractors. Indeed, the European Parliament’s “Trialogue Note” on the recent revisions to the Directive notes that the new provision on subcontracting will “contribute to prohibit illegal offsets....”¹⁷⁵ Thus, it is not at all clear how a national authority could use offsets as a basis for making an award or require such offsets as a condition of the award. Of course, the national authority could potentially seek to use a variety of provisions that afford it discretion—e.g., security of supply or provisions allowing it to qualify bidders—to try to favor bidders that offer off-the-books offsets. Also, primes may recognize the need to use local contractors even if the government cannot require them to do so. However, it is not certain that the Commission would accept, and not challenge, these types of conduct. Thus, national authorities seeking considerable offsets might feel the need to resort to an exemption such as Article 296 for this purpose. How this issue is resolved is central to the future of the Directive given the prevalence of offsets in the EU.
- **Exemptions.** During the Trialogue process, the EC consistently resisted the Member States’ request for such an exemption “inside” the Directive. Rather, in a compromise, the EC Defense Procurement Directive, as amended, explicitly recognizes the specific exemptions set forth in Articles 30, 45, 46, 55 and 296 of the EC Treaty, and makes clear that the award of contracts falling subject to the Directive can be exempted if it is fully justified on the grounds of national security under these Articles.¹⁷⁶ However, the Directive warns that recourse to such exemptions should be interpreted as truly extraordinary, and advises that this must be done in accordance with case law of the ECJ, which clearly limits the scope of these exemptions.¹⁷⁷

¹⁷⁵ European Parliament, Directorate General Internal Policies of the Union, Committee on Internal Market and Consumer Protection, “Feedback Note on Informal Trialogue on Defence Procurement Directive,” p. 3 (Jan. 5, 2009) (“Trialogue Feedback Note”).

¹⁷⁶ The Transfers Directive also recognizes that Articles 30 and 296 EC Treaty continue to be applicable by Member States *provided the extraordinary conditions of their use are met*. However, it points out that since Member States can now use the new Transfers Directive, there should be no need to use Articles 30 or 296 EC Treaty to achieve their license and export safeguarding restrictions. Transfers Directive, op. cit., p. 3.

¹⁷⁷ EC Defense Procurement Directive, op. cit., pp. 4-5.

- **R&D and Follow-On Production.** There is some sign that the UK may remain dissatisfied with the revised EC Defense Procurement Directive relative to an exemption for production contracts where prior R&D contracts were competitively awarded. Indeed, this issue is handled in the preamble to the Directive rather than by Articles of the Directive. According to the Society of British Aerospace Companies press release January 14, 2009:

[L]ike all legislation at the EU level, the end result may not be perfect and we are still particularly concerned about the extent to which national governments can maintain their flexibility to give long term contracts covering development and production where they choose to use this route. This concern has unfortunately not been addressed within the Directive despite strong support from the UK's MoD. However, Article 296 should ensure that the Directive does not cover high technology weapon programmes. The UK Government will need to implement the Directive responsibly once it has been approved by the EU Council of Ministers."¹⁷⁸

The Aerospace and Defence Industries Association of Europe (ASD) has also expressed concerns regarding how follow-on production is treated, calling the new EC Defense Procurement Directive a "mixed blessing" for industry. According to ASD, while the new Directive will encourage cross-border competition and trade as well as transparency in defense and security markets, the "text could be damaging to R&D investment and hence to the defence and technology base in Europe."¹⁷⁹

ASD's concern is that the Directive does not support the traditional business model under which defense industry operates: namely, that firms make investments in R&D and usually realize a payoff on such investments during the production phase. In contrast, the Directive requires that after a prototype is developed and demonstrated, the procurement contracts would specifically have to be competed in accordance with the Directive (unless production is a contract option to the R&D phase contract). As the ASD's statement notes:

[T]his complex directive rather overlooks the fundamental fact of defence procurement that new products are designed at national taxpayers' expense for that nation's Armed Forces." According to François Gayet, the chief of ASD, "To apply the logic of EU internal market rules which rigidly divide R&D and production phases is to reduce the incentives for defence capability investment by both the public and private sectors... So, while Article 296 of the EU Treaty provides exemption from internal market rules when Member States judge that their essential security interests so require, defence and security procurements falling under the competence of the Directive will increasingly be met by old or imported technology."¹⁸⁰

Some sources suggested to this study team that the EC included these provisions in the Directive so that Member States would consider less costly off-the-shelf options

¹⁷⁸ http://www.sbac.co.uk/community/cms/content/preview/news_item_view.asp?i=19085&t=0.

¹⁷⁹ ASD Press Release, Jan. 15, 2009 (not available on web). For an article on the release, see "European defence industry association cautious on new EU directive," *defenceweb* (Jan.15, 2009). Available at: http://www.defenceweb.co.za/index.php?option=com_content&task=view&id=970&Itemid=282.

¹⁸⁰ *Ibid.*

already put on the market in other EU Member States, a policy for cost-effectiveness. But the obligation to re-tender at the production stage was fiercely contested by European industry, which believes it will decrease incentives for public procurement authorities to fund R&D projects.

- **Judicial Review Remains Critical.** Regardless of outstanding issues, on balance, the adoption of the new Directives is very positive. The compliance of each Member State with these legally binding Directives will be subject to judicial review by not only a national court but, upon request of the EC, by the ECJ. Indeed, the EC itself notes that "the availability" of the Directive, "a Community instrument adapted to the specificities of defence will make it easier for Member States to limit the use of the exemption under Article 296 to exceptional cases, as it is stipulated in the Court's Case law."¹⁸¹ That is, the Directive, once approved, will give all companies, U.S. or European, a way to seek legal redress in case of violation of the Directive or abuse of Article 296 by Member States. A bidder will be able to bring a complaint before the EC and the EC may then turn to the ECJ for legal action. A bidder also can elect to itself take action in the relevant national courts or use the review procedures set forth in the Directive.¹⁸²

Significantly, virtually all parties interviewed for this study agreed that the most important aspect of the new Directives are that they have the force and effect of law and can be judicially challenged. All believed the prospect of judicial challenge, if not its actuality, will force more discipline on the part of Member States and, over time, result in a more open and competitive European defense market. If some governments continue to seek to protect their markets in conflict with the Directives, they would be subject to judicial action.

In issuing these new Directives, the Commission is creating a form of "supranational" tool in the defense area, which is for the most part an intergovernmental area in the EU. As one EC representative said to the study team, "We are taking 1st Pillar Steps (i.e., within the EU's authority to promulgate legally binding rules) in a 2nd Pillar area (e.g., such as ESDP, which is intergovernmental in nature under Council auspices)." Thus, this "EC Package on Defense Procurement" is groundbreaking in nature and a definite move toward creating the legal basis for a European defense market.

3. The EC Defense Procurement Directive is a Flexible Instrument Likely to Bring More Defense Procurements Into a Transparent and Competitive Procurement Process. The effect of the Directive is to create a flexible alternative for contracting authorities between two extremes. On the one hand, the current EC Public Procurement Directive, designed for less complex civil procurements of products and services (which do

¹⁸¹ See: http://ec.europa.eu/internal_market/publicprocurement/dpp_en.htm.

¹⁸² If the Directives are poorly implemented by a Member State, after the deadline for implementation has passed, private parties may rely on the Directives in their national courts if they meet certain requirements. However, there may be differences in the legal basis for enforcement and appeal at a national level versus the EC/ECJ level, depending on the final form of the Directives as voted by Parliament.

not fall under Article 296), has certain rigidities that limit its suitability for defense procurements; it has no provisions dealing with confidentiality of information or security or supply, for example, or limiting the opportunities for competitive bidding in certain circumstances. On the other hand, Member States today routinely invoke Article 296 EC Treaty, which entirely exempts procurements from the rigors of an open and competitive marketplace and allows old behavior (sole source national buying) to continue unfettered.

Thus, if the new EC Defense Procurement Directive is effective, it allows contracting authorities to bring defense procurements within the EU's legal framework but also allows the contracting authorities the flexibility to adjust the procurement to the unique aspects of defense markets.

The Evolution of a Three-Tiered Defense Procurement System—With Some Escape Routes. With the new Directive in place, the hope and expectation of the Commission is that a three-tiered defense procurement system will evolve:

- Most procurements would be under the disciplines of the new EC Defense Procurement Directive, and be subject to the rules on public notice and competitive bidding;
- A more limited set of highly sensitive procurements would not be subject to the new Directive but would potentially be advertised on EDA's Bulletin Board (allowing some transparency and the opportunity for competition but less than the Directive requires);
- Finally, some extraordinary cases, as outlined in the Directive exemptions, including some highly secret procurements (intelligence, sensitive technologies, "black" programs) would potentially still be brought under Article 296 EC Treaty—but these would be the exception, and potentially not advertised outside limited nationally defined boundaries.

4. The Directives Are Internally Focused, and Do Not Directly Affect Compliance With International Agreements or ITAR. As noted above, a key point stressed by numerous EC officials and others interviewed is that the EC Defense Package is largely an internal matter—i.e., it is about facilitating the creation of an internal European defense market rather than a series of fragmented national markets. Indeed, the EC Defense Procurement Directive's preamble drives home the point that the package is not about the participation of third-country firms in European markets but about the internal market only. It states in relevant part that "Member States retain the power to decide whether or not their contracting authority/entity may allow economic operators from third countries to participate in contract award procedures."¹⁸³ In short, the EC Defense Package is not about Transatlantic defense industrial relations or Transatlantic arms sales, and it is not about reorganizing or superseding existing U.S. procurement relationships with EU Member States. This has a number of specific implications:

a. The EC Transfers Directive does not have any effect on ITAR licensing obligations of EU or other parties. In other words, the creation of new EU-mandated licenses does not obviate the need for parties to seek any ITAR authorizations needed for internal EU transfers (re-transfers of articles or technical data under U.S. law). EC officials inter-

¹⁸³ EC Defense Procurement Directive, *op. cit.*, p. 5.

viewed confirmed that the EC Transfers Directive did not affect in any manner U.S. licensing requirements.

b. The EC Defense Procurement Directive is not intended to have any effect on existing reciprocal procurement MoUs between the United States and Member States. Some fifteen European nations have signed reciprocal defense procurement Memorandums of Understanding (MoUs) with the United States. While these agreements vary to some extent, they all have some degree of “national treatment” obligation whereby, as the U.S.-UK Reciprocal Procurement MOU states, each government states its intent to “provide firms of the other country with treatment no less favorable than that accorded to domestic enterprises.”¹⁸⁴ Whether or not fully binding, the intent of these agreements is to facilitate Transatlantic defense trade and cooperation. Indeed, the execution of these MoUs does provide material benefits as they have the effect of waiving the provisions of the Buy American Act and any “buy national” laws in our partner countries. In the United States, this means that a country is added to the list of “qualifying countries” in the Defense Federal Acquisition Regulation Supplement, and that offers of products of that nation would be exempt from the U.S. Buy American Act and Balance of Payments Program policy that would otherwise require DoD to add 50 percent to the price of the foreign products when evaluating offers.

The question that arises is how these MOU obligations on national treatment comport with the obligations of the EC Defense Procurement Directive that requires EU members to compete procurements and afford access to firms from other EU countries to procurement opportunities. EC officials indicated that the new EC Defense Procurement Directive is not intended to affect, and is neutral with respect to, the national treatment and other obligations in such reciprocal procurement MoUs. The Directive, as now amended, explicitly incorporates this logic—creating a formal exclusion to its terms for contracts awarded pursuant to specific rules of international agreements or arrangements between Member States and third countries.¹⁸⁵ However, this language is narrowly drawn to exempt specific contracts and to some extent begs the broader issue of whether European governments bound by the MoUs will now provide similar rights to U.S. firms as to other European firms. To the extent that EU Member States do not afford U.S. firms the same rights under the Directive as their own firms, they are likely to face significant concerns from the United States. A fair reading of the spirit, if not the letter, of the reciprocal MoUs is that U.S. firms should be afforded similar rights to their own national firms under procurement legislation. Thus, *in theory*, U.S. firms competing as contractors or subcontractors for procurements in EU Member States with reciprocal procurement MoUs with the United States should stand on the same footing as domestic firms in all respects.

As a practical matter, the Directive has tried to remain neutral on this matter, effectively leaving the issue of compliance to Member States. Put another way, the Directive has no provisions that will prevent Member States from carrying out MoU responsibilities and extending the benefits of the new Directive to U.S. firms participating in their markets. Hence, it is now left to Member States on whether to afford the same right to U.S. firms.

¹⁸⁴ Memorandum of Understanding Between the Government of the United States and the Government of the United Kingdom of Great Britain and Northern Ireland Relating to the Principles Governing Cooperation In Research and Development, Production, Procurement and Logistics Support of Defense Capability (“U.S./UK Reciprocal Defense Procurement MOU”), Section 2.3.

¹⁸⁵ EC Defense Procurement Directive, *op. cit.*, Art. 8, pp. 32-33.

And, ultimately, the United States will need to determine whether to maintain MOUs in place with countries that do not afford its firms this type of treatment.

5. Modest Expectations: The Directives Are Likely to Gradually Change Buying, Licensing and Possibly Offset Behaviors

EC representatives interviewed for this study expressed modest expectations. They anticipate step-by-step “harmonization and liberalization of markets,” and added transparency of Member State use of Article 296. They are expressly *not* forcing top-down joint EU requirements or ultra-stringent procurement controls. These new Directives are *flexible* tools—but national authorities still have some discretion in when and how to use them and the pace and scope of implementation is likely to be gradual and evolutionary in nature.

To conclude, in the near term the new Directives will have some effect, but probably real behavioral changes will be limited. Even in a single national setting it takes years for new Directives to be effectuated in practice. Further, established behaviors change slowly and national security, resource and jobs interests are at stake. These new EU procurement and licensing tools will be seized by those who see advantage in it: those firms who want to make cross-border deals and sales, for nations who want to seek more competition by including other EU firms’ offerings. Ultimately, the new EC Defense Procurement Directive will over time change national behavior as the prospect of litigation can serve to discipline national conduct. But it will be up to the Commission and EU firms to monitor national implementation, procurement behavior and decisions, and licensing activity. The changes in procurement behavior include the potential for changes in offset requirements, as procurement decisions made within the Directives would be based on defined criteria and would be theoretically open to “protest” or redress via the courts. These are difficult changes given the current market environment. And in the area of ultimately discretionary licensing, it will not be easy to force significant discipline on national authorities.

The EC Transfers Directive similarly is a flexible tool to facilitate cooperative and trans-border programs. Under the Directive, firms in Member States now can propose the use of “Global” licenses. Of course, despite language discouraging the use of individual transfer licenses, Member States nonetheless do have considerable discretion under the Directive to select which type of license to utilize for a particular export and to impose various licensing conditions. Indeed, it should be noted that a similar set of licenses were established under the LOI-FA and have largely not been used.

The Draft EC Defense Package: Core Issues for the United States

The Prospect of a European Preference and the European Desire for Fairness, Reciprocity and Balance. A central issue relative to U.S. interests is whether the new EC Defense Procurement Directive has built in a European preference. Significantly, on its face, the proposed Directive lacks an overt preference for European buying at this writing: EC officials went out of their way to stress this to the study team. To a fair degree the lack of an explicit European preference reflects that the Directive is largely not about the Trans-atlantic defense relationship. Rather, the thrust of the EC Defense Procurement Directive is to break down impediments between EU Member States still engaged largely in national buying.

The recent revisions to the EC Defense Procurement Directive now confirm this; as noted above, the preamble states that, in the context of defense and (homeland) security markets, *Member States* retain the power to decide whether or not to allow economic operators (firms/bidders) from third countries to participate in their contract contests/awards. Thus, the Directive effectively allows Member States the right to decide whether to afford third-country firms the rights provided to European firms under the Directive. In this sense, the MOU does not change the *status quo ante*.

However, the MOU does include language of trade reciprocity, fairness and balance that might be read as code language for limiting U.S. firms’ market access. Specifically, as a recital in the Directive’s preamble states, Member States should take the decision whether to open their markets to third-country suppliers

[o]n grounds of value for money, recognizing the need for a globally competitive European defence technological and industrial base, the importance of open and fair markets, and the obtaining of mutual benefits. Member States should press for increasingly open markets. Our partners should also demonstrate openness, on the basis of internationally agreed rules, in particular as concerns open and fair competition.

While some elements of this formulation are benign, others signal a Commission desire, expressed orally to the study team and reflected in other documents, for “balance” with the United States. The European Parliament’s “Feedback Note” on the Trialogue discussions notes that this provision is designed to convey “a clear political signal” on “mutual market access (reciprocity).” The implications are that nations should think twice about affording U.S. firms the same rights as European firms under the Directive without a quid pro quo.¹⁸⁶

More Subtle Areas of Potential Discrimination. As discussed below, beyond the question of an overt European policy preference, several aspects of the Directive clearly raise the prospect of implied European preferences. Specifically, the three areas where the EC Defense Package could potentially lead to more subtle forms of discrimination against non-EU defense products and services are security of supply, security of information, and standards.

Security of Supply. One key risk posed by the new EC Defense Procurement Directive is that national procurement authorities could discriminate against U.S. firms competing as contractors or subcontractors on the basis of “security of supply”—particularly on the grounds that the prospect of obtaining a needed ITAR authorization for the contract renders their bid less “secure” than a bid from a competitor that does not require an ITAR license.

“Security of supply”—that is, the risk of a national buyer relying on a foreign contractor or subcontractor—has long been an issue for European nations in moving toward a European defense market. This concern relates to relying on other European nations as well as the United States, and other non-EU suppliers (e.g., Australia). Hence, not surprisingly, to create more comfort over the prospect of trans-border mergers, the Framework Agreement contained explicit provisions on security of supply and the Security of Supply Implementing Arrangement establishes the authority of national authorities to take action to maintain domestic capability after acquisitions.

¹⁸⁶ Trialogue Feedback Note, op. cit., p. 2.

While the EC Defense Procurement Directive does not establish such a regime, it does lay the groundwork for it. A recital in the Directive's preamble states that "Member States should take concrete measures to improve security of supply between them aiming at the progressive establishment of a system of appropriate guarantees."¹⁸⁷ Obviously, the existence of such guarantees could serve as the basis for EU countries to discriminate, on a security of supply basis, against third-country firms whose governments have not entered into such arrangements.

In the meantime, before such a system is put in place, the new EC Defense Procurement Directive affords each national contracting authority the discretion to specify requirements to guarantee security of supply, and to discriminate among bidders on the basis of their proposal in this area. Specifically, the EC Defense Procurement Directive allows the contracting authority to require that the bidder submit, among other things, documentation or certification that the bidder can meet its commitments, and this may include assurances on the export licenses.¹⁸⁸ The bidder may also be required to submit similar documentation supporting that the bidder's supply chain can meet all of the outlined security of supply requirements. On its face, affording national authorities this type of flexibility to consider "security of supply" in contracting is reasonable and appears neutral in nature (i.e., not intended to discriminate on the basis of nationality). There is no doubt security of supply is a legitimate consideration for national authorities in procuring weapons systems, and a crucial one for enabling the EU to increase market access among Member States. Yet, on a practical level this type of requirement could be utilized as a subtle market access barrier for non-EU, and particularly U.S., firms.

ITAR and Security of Supply Risks. Specifically, the new EC Defense Procurement Directive requires bidders to provide documentation that: 1) demonstrates that the bidder can honor its obligation to export articles for the contract; 2) discloses any restriction on the contracting authority on the transfer or use of any the products of services being provided; and 3) provides information on the ability of the national authority in the bidder's host country to provide support in time of crises. Providing these assurances may pose serious challenges, or additional burdens in time and cost to bid, for U.S. contractors in light of the ITAR restrictions. In general, the nature of ITAR licenses are such that parties cannot reasonably provide strong assurances—especially about re-exports; a license to export a subsystem does not necessarily mean, for example, that the final produced system would be licensable to all destinations. In contrast, European firms may be better situated. Specifically, the operation of the new EC Defense Procurement Directive together with the new EC Transfers Directive could potentially discriminate against U.S. firms. For example, imagine a national procurement where one bidder is a European supplier with a supply chain from wholly within the EU operating under export licenses issued under the EC Transfer Directive (e.g., the global licenses). A second bidder might also be a European supplier but its supply chain might include U.S. firms that would need ITAR authorizations of various types to participate in the program and for re-export of resulting systems in some cases. Needless to say, a national authority might very well grade the bidder with the EU supply chain as more "secure" because of the reliance on the new EC Transfers Directive, and the bidder with the U.S. subcontractors more insecure because of the uncertainty of

¹⁸⁷ EC Defense Procurement Directive, op. cit., p. 2 (recital 5); Trialogue Feedback Note, op. cit., p. 4.

¹⁸⁸ EC Defense Procurement Directive, op. cit. Art. 15, p. 40 requires that the bidder provide certification or documentation that the "organization and the location of its supply chain will allow it to comply with the contracting authorities requirements."

obtaining ITAR authorizations (which typically will not be in place at the time that the bid is submitted).

Also problematic are the potential provisions allowing bidders to be qualified on the basis of commitments from Member States on export assurances. In this regard, EU Member States will likely have in place certain reciprocal agreements (including the Framework Agreement and the implementing arrangements promulgated thereunder). In contrast, the U.S. government typically does not issue these types of assurances (reserving its prerogatives to deny exports as circumstances develop on a case-by-case basis).

In discussions with national procurement authorities, the linkage between “security” of supply criteria and the ITAR is well known and understood. Numerous national officials confirmed that, in fact, the Directive may allow national customers to discriminate against bidders relying on ITAR licenses on the basis of security of supply considerations. Indeed, the general attitude of national procurement authorities is that the United States has itself created this situation by how it manages its ITAR licensing policies (i.e., ITAR exists as its own barrier). In other words, while this is a discrimination of sorts, they believe it is a legitimate one (i.e., based on concrete security of supply concerns rather than protectionism based purely on nationality).

Full Life Cycle Support Commitment. The EC Defense Procurement Directive also requires a bidder to commit to establish or maintain the capacity needed to provide any additional needs required as a result of a crisis and to provide supporting documentation from the bidder’s national authorities regarding the fulfillment of such additional needs in a crisis. Further, in the event the bidder stops making the product in question, it can be required to commit to sell to the government customer, on terms and conditions to be agreed, all capabilities needed for production/support (e.g., spare parts, test equipment, drawing and licenses, etc.). This need for sustained support is understandable in opening markets among all EU Member States. Again, it could pose challenges for a U.S. bidder to provide such assurances and for the U.S. government to provide documentation supporting the provision of additional needs in a crisis; this is a matter normally left to case-by-case determination and the United States would probably be unwilling to commit long in advance to ensuring supply in writing. In contrast, the leading EU countries have already provided assurances along these lines in the LOI implementing agreements and thus will be at an advantage in providing them here.

* * *

In short, the ability of national procurement authorities to use “security of supply” as a discriminator in contracting could well be, or evolve into, a disguised market access barrier in practice. At worst, the EC Defence Procurement Directive’s security of supply provisions might effectively allow nations to “opt into” the Directive’s disciplines and yet disqualify foreign bidders on the basis of “insecurity of supply.” There is the potential that national procurement authorities could use the force of the new Directives to legally exclude foreign suppliers (i.e., where they want to procure non-EU weapons or EU weapons with significant non-EU content they can do so by discounting the security of supply criteria accordingly, and where they do not they can rely on “security of supply” as a basis for exclusion). This potentially creates a gaping hole in the rules that, in the hands of some national buyers, can

be used to undermine the basic disciplines in the Directive. How this is handled in practice remains to be seen. Hence, this remains an area of caution for the United States.

Security of Information. As noted above, the EC Defense Procurement Directive recommends the EU harmonize security of information processes on the treatment and safeguarding of sensitive (predominantly classified) information between Member States in order to facilitate intra-European defense integration. Indeed, the LOI countries have already adopted such rules in the LOI-FA, which contains detailed “mutual recognition” provisions that recognize personnel security clearances issued by each participating nation without regard to the standards utilized. EC officials told this study team they may seek to model an EC approach after the LOI arrangement—yet another area where the LOI arrangements are having a real effect and being adopted EU-wide.

The risk of discrimination could come into play, however, because the EC Defense Procurement Directive allows national source selection authorities leeway to seek commitments from bidders (and their subcontractors) that they will safeguard classified information, and to provide “sufficient information on the subcontractors already identified to enable the contracting authority to determine that each of them possesses the capability to protect such information.”¹⁸⁹ The risk here thus is twofold. First, if an EC information security arrangement is established, it could be used as a discriminator by national source selection authorities in grading bids. To the degree that a bidder’s subcontractors fall under such a regime (because the subcontractors are all from EU Member States), this could be viewed as creating stronger “security of information” (and a higher grade) than another bidder using subcontractors from outside the EU (which would not be subject to such an information security regime).

Second, even if no EC arrangement is established, the new EC Defense Procurement Directive affords significant discretion to the national authorities. The Directive specifically states that in “the absence of (EU) Community level harmonization of national security clearance systems, Member States may provide that the measures of the Directive must comply with their national provisions on security clearances.”¹⁹⁰ This provision thus allows national authorities to establish their own preferences based on security of information, and potentially discriminate against any foreign bidders or their subcontractors on this basis, whether from other EU Member States or outside the EU.

To be clear, there is nothing in the new EC Defense Procurement Directive, as written, that in fact creates discrimination. From an objective standpoint, one would expect U.S. firms to fare well in being able to satisfy Member States’ needs for assurances on security of information given their experience in meeting DoD’s stringent requirements in this arena and the existence of bilateral industrial security agreements between the United States and most European countries. The question, however, is how the discretionary use of the new Directive authorities by national contracting bodies might affect U.S. bidders.

Hierarchy of Specifications/Standards. As a “European” defense market emerges, another potential disguised market access barrier can potentially arise through contractual requirements to meet specific technical standards.

¹⁸⁹ EC Defense Procurement Directive (Amended), op. cit., Art. 14, pp. 39-40.

¹⁹⁰ Procurement Directive (Amended), op. cit., Art. 14, p. 40.

The EC sees the use of a common set of EU-wide standards as one key to overcoming the barriers and inefficiencies of the European market. An integrated EU defense market is impossible with the existing plethora of national standards. Today there are innumerable national level standards for products and processes. The EC is in the process of identifying a suite of preferred standards in use by European contracting authorities for defense products in an EU Standards Handbook. At the first order priority, the EC is relying on NATO Standardization Agreements (STANAGs).¹⁹¹ STANAGs are technically not international standards but agreements among NATO members. However, in the defense arena, for all practical purposes these serve as international standards in the absence of other international standards. However, STANAGs exist only in some areas and not in others. The EU intent is to identify a complete set of needed standards by invoking accepted, recognized international and European standards, and if holes remain, by European approved Member State technical standards.

On its face, the creation of a comprehensive set of European standards is not inherently discriminatory. Such standards could help to integrate the European market, allow a common baseline for competitors to bid, and facilitate cross-border trade.

However, there are risks that such standards, as they evolve, could become market access barriers. Specifically, the EC Defense Procurement Directive affords national authorities the right to establish technical specifications for contracts by resorting to, in “order of preference”: 1) national civil standards that transpose European standards, European technical approvals, common civil technical specifications, national standards transposing international standards, among others, or; 2) performance or functional requirements.¹⁹²

Could this hierarchy of standards that emphasizes European approved standards lead to a disguised—intended or unintended—U.S. trade barrier? On the face of the Directive, the answer again is no. The new Directive requires that specifications “shall afford equal access for tenderers [bidders] and not have the effect of creating unjustified obstacles to the opening up of public procurement to competition.”¹⁹³ Article 10 of the Directive also states that Member State contracting authorities may not reject a tender if the bidder can prove that the solutions he proposes satisfy the requirements in an “equivalent” manner to national, European or international standards being utilized, as the case may be.

Yet, in practice, the creation of a set of European standards and the hierarchy of standards does pose a practical risk that firms that do not meet European standards could have their bid excluded or graded lower on this basis. The emergence of European standards also could prove to make U.S. products more expensive if they were required to bid products to meet certain European standards they are not used to meeting today. Standards have in the past been drawn in a protectionist manner to favor local suppliers in numerous countries. While the use of NATO STANAGs and international standards is constructive, it is not dispositive because, as noted above, the STANAGs and international standards will not cover all areas requiring specifications or standards.

¹⁹¹ NATO Standardization Agreements for procedures and systems and equipment components, known as STANAGs, are developed and promulgated by the NATO Military Agency for Standardization in conjunction with the Conference of National Armaments Directors and other authorities concerned. See: <http://www.nato.int/docu/standard.htm>.

¹⁹² Procurement Directive, op. cit., Art. 10, p. 35.

¹⁹³ Procurement Directive, op. cit., Art. 10, p. 35.

The Long-Term View: Evaluating the European Role in Defense Markets With Qualitative Metrics

When viewed *in toto*, the question is one of the likely trajectory of the *European* defense market over the next 10-15 years, and its implications for the United States. Will European market behaviors change materially from the current fragmented, national approaches now in place?

The Institutional Basis for a European Defense Market Is in Place

As a threshold matter, the institutional framework for a European defense market put in place by the EU appears to be sustainable. While nascent, incomplete and lacking significant funding, there are strong national commitments to this effort (unlike prior European defense efforts) and the process of change has gained momentum.

Specifically, as we have shown, the core elements of European institutional framework are now in place:

- **The EU as Regulator.** After various false starts and years of drafting papers, the EU has taken a lead role in creating a European defense market through its draft defense package now about to be finally implemented.
- **The ECJ: Enforcement of EU Open Market Principles.** Through its rulings, the ECJ has asserted itself with respect to limiting the use of Article 296 EC Treaty. As an institutional matter, the ECJ's rulings evince a clear intent that the court will not allow the use of Article 296 to undermine core EU open market concepts.
- **The EDA Is Firmly Established as an Emerging Center of Gravity for European Defense and an Institutional Catalyst for Change.** The EDA is becoming a force for focusing and coordinating European demand and integrating the European defense industry. As noted above, through the process of developing the ECDP, EU Member States' National Armaments Directors and their staffs meet regularly and engage in in-depth discussions under EDA auspices. Hence, EDA has become the focal point for discussions of European armaments directors about identifying capability needs, planning joint activities and moving forward efforts to develop a truly European armaments strategy. The EDA also may be able to coordinate activities to better leverage EU and Member State resources. To quote one U.S. diplomatic representative in Brussels: "The EDA represents a sea change in how the EU is doing its business in defense." Even critics admit the EU and Member State commitment to the Agency is strong.
- **OCCAR Has Proven an Effective Vehicle for Project Management, and May Become a Formal EU Procuring Agency.** It makes little sense to leave it free-standing—especially as EDA shifts more into managing development programs and as synergies develop between the two agencies.
- **The LOI Agreements Eased Security of Supply Concerns, Fostered Consolidation and Continues to Provide a Forum.** The six leading nations developed norms reflected in tangible and binding arrangements that became a basis for actions taken by EDA across EU nations. Perhaps the positive impact has been to relieve anxieties among the LOI supplier governments—primarily about security

of supply. As discussed above, there were legitimate concerns in this area, borne of real experiences, that the LOI process and the LOI Security of Supply Implementing Arrangements sought to address. Unlike in the United States, the process of industrial rationalization created the prospect that LOI governments could end up potentially reliant wholly on a foreign capability for a key strategic need. Hence, numerous European observers believe that the LOI process and, ultimately, the binding rules adopted, helped allow governments to feel more comfortable about this risk and, thus, actually facilitated the defense industrial consolidation process within Europe and the consolidation of transnational firms like EADS, the European leader in aeronautics, and MBDA, the European missile producer. While the degree of this impact is not quantifiable, it is safe to say Europe would not have experienced the degree of supplier consolidation and interdependence it engenders without such explicit assurances on security of supply. MoD officials in various LOI countries indicated that, even after the creation of EDA, the group has been a useful forum for reaching a consensus among key European supplier nations that can then be brought to broader EDA discussions. Hence, the LOI forum is likely to play a role at least for the near term.

- **Other EU and Multinational Precedents Are Benchmarks of the Trend Toward a European Defense Reality.** Finally, lest there be any doubt, both the EU institutional precedents and broader global precedents strongly suggest that the EU efforts to create a European defense market must be taken seriously and are sustainable. To quote one European Parliamentarian:

Open borders: 12 years start to finish; EURO: 10 years start to finish; ESDP and associated market changes? We are 5 years into a 15-year project.

Metrics of Future Market Outcomes

In light of the likely sustainability of European institutional arrangements concerning the defense market, the following is an effort to posit realistic European defense market “outcomes” over the next 10 to 15 years with respect to the market metrics set forth at the outset of this study (demand, supply, and openness to U.S. participation).

Demand Side Metrics

Are European defense requirements emerging? Is European buying taking hold (i.e., through the EU rather than ad hoc)? Are European programs (R&T and procurement) likely?

European requirements will increasingly but gradually supplant national requirements over the next decade.

The ESDP is likely to create EU requirements that will themselves be translated to cooperative European R&T and procurement programs (among all of Europe or a smaller group of countries). This evolution will likely be gradual and evolutionary in nature. The smaller countries, with more limited capabilities, and funding, are likely to be the first to shift entirely from national to European requirements.

European-cooperative buying will likely continue to grow over stand-alone national buying (R&T and procurement).

While it remains to be seen if European nations will spend materially more on defense procurement, it is likely that an increasing percentage of the armaments spending of Member States over the next decade will be on European programs (including through both the EU and on an ad hoc basis). Economics alone is a significant driver of this change as most European nations can no longer afford to establish go-it-alone national programs.

In the short term, the likelihood is that R&T and procurement programs will more likely be among smaller groups of countries. As time goes by EDA could become the agent for a broader range of European programs. Spending on EU R&T through the JIP is likely to increase materially and to beget follow-on collective procurement programs.

The support for this set of projections is manifest in a number of actions and patterns that have emerged—in effect, this is a matter of connecting the dots.

- **European cooperative buying already is significant.** Today many European countries in fact have already moved to increased pan-European buying or at least cooperative programs—particularly the LOI 6, who represent more than 90 percent of all EU defense spending. They already spend upwards of 20 percent of their budgets on cooperative procurement efforts, with R&T spent largely on a national basis.
- **The EU is becoming the focal point of *European space programs*.** Simple economics—that space is too expensive for any single European nation to do alone (even for the few big players)—has driven a move toward European space programs. A continuance and growth of a shared European space program is likely, combining space system use and developments with reconnaissance capabilities requirements. The French White Paper, June 2008, explicitly called for more space industry consolidation.
- **The EU has developed a focused, well-funded homeland security program.** The EU is committed to this course, and will likely continue the Seventh Framework Programme (known as FP7) R&T program it is funding for homeland security. This may expand into an EU-led and focused program for EU-wide developments and production, including identifying centers of excellence for technology and feeding back into EU operational deployments.
- **R&T Pooling and an EU Defense Advanced Research Projects Agency (DARPA)?** The EDCP and JIPs are likely to lead to more pooling of national programs or technology projects to advance developments in some capabilities areas. The EDA JIPS might seed the notion of a European DARPA-like entity to take on

these efforts, so that each area does not need a new stand-up team each time. Such combined R&T efforts are likely to lead to more joint cooperation on follow-on procurements. Once R&T projects yield promising programs, it would be natural for the nations to continue collaborative efforts until a fielded capability is developed.

Demand Side Metrics

Will European procurement rules produce a more open and competitive European defense market (i.e., opening national markets to more competition)?

The political will is now there for a real EU defense market; everyone wants a strong technology and industrial base and cross-EU exports; the ambivalence from Member States is the sensitive issue of protecting their own national interests.

—*EDA Official, January 2008.*

For the reasons described above, the evolving European defense industry dynamics—the strong economic and political “drivers of change,” the adoption of the new Directives, and the development of the institutional framework for a European market—are likely to create, over time, a more open and competitive European defense marketplace. Ultimately, the threat of action by the ECJ and the Commission will force change on reluctant national buyers.

Supply Side Metrics

Has or will Europe put in place the enabling environment to facilitate the creation of a European, as distinct from national, defense industrial base?

Will European rules, arrangements and policies encourage additional consolidation and rationalization of underutilized European defense capabilities?

The LOI-FA and related agreements have largely put in place the institutional framework for defense industrial consolidation in Europe. These agreements address key concerns for the governments involved, including, most notably, issues of security of supply (i.e., the assurance that a customer can rely on a foreign owner to provide a vital need).

Interestingly, while consolidation proceeded apace in the aerospace and electronics elements of the European defense market, it has lagged in other aspects of the European defense market—notably, areas such as ground vehicles, shipbuilding and munitions. In these areas (and to a lesser degree in aerospace and defense electronics), there continues to be national champions and significant underutilized capacity. These business areas often

are among the most protected in these countries and, hence, the most difficult to consolidate and rationalize. A number of these businesses continue to be state-owned as well (e.g., Nexter in France).

It is not clear whether additional regulatory action is needed to facilitate further consolidation. Rather, the issue is one of will and realism on the part of national governments and owners. By and large, the MoDs recognize this problem and generally favor intra-European consolidation in these sectors. The dilemma is one of potential job loss; everyone would prefer the downsizing occur elsewhere. But gradually consolidation is moving forward and Europe can likely expect a “second wave” of consolidation in these other sectors—driven primarily by economic realities.

Finally, the increased “demand side” coordination and ongoing consolidation is likely to result, over time, in EU-recognized centers of excellence for certain types of technology or products—these may become apparent without the need for a major forcing function. While this may not represent the bulk of program resources, it may already be seen in Domain Pooling concepts being explored by France and the UK. The shared industry sources already formed from multinational firms encourages this work.

Implications for the United States

Will emerging European rules, arrangements and policies create an impetus for closing the European defense market to U.S. suppliers (i.e., and reduce their ability to access the European market)?

Considering European Motivations. Understanding the risk of a “Fortress Europe” emerging (replacing “national” fortresses) requires some analysis of European motivations and intentions with respect to defense markets. Of course, Europe is not monolithic and various governments and constituencies have different views. The views of EU institutions, NATO, national governments, and industry obviously reflect differences and imply somewhat different futures for the European defense marketplace. The following offers some insights into these varying viewpoints and their implications for the United States.

On one level, virtually all parties interviewed concur that the drive to create a more open and competitive European defense market and more integrated and strong European defense industry is primarily internal in nature. There is a genuine desire to get their own house in order, and an imperative to end the fragmentation that fails to optimize both the spending of scarce public resources and the capabilities of European industry.

On its face, this drive is one the United States supports and concurs in. The U.S. government has for years urged European Allies to spend more and spend better on defense and develop more robust capabilities. Thus, to the extent Europe seeks to rationalize its spending and develop an open market to encourage more innovative and affordable solutions for its war fighters, the United States would agree these moves are salutary and advance our

own interests in collective security and burden sharing. The development of a strong European defense identity over time can mean a stronger security partner to the United States¹⁹⁴. If the vision of the EU and EC for a stronger defense and technology industrial base were realized, it would provide the U.S. a partner with better capabilities—a Europe where they spend better for defense, even if not more, with less duplication, to better effect.

At the same time, there are multiple motivations or impulses in Europe for this effort—at least several of which are less benign and pose potential challenges for the United States:

A Desire for EU Defense Industrial Autonomy. First, it is clear the EC Defense Package and related measures are not simply about more affordable and better weaponry, but also the development of a stronger European defense technology and industrial base as an end in itself. From Airbus to Galileo to a host of other initiatives, European governments have sought to foster a strong *European* industrial base.

Significantly, in this connection, what emerges from EU documents and statements, including from those interviewed for this study, is a widely expressed desire for “independence” or “autonomy”—a European defense industry with capabilities in key areas and a military able to operate in autonomy. This has a number of manifestations:

- In some quarters, this drive for European defense autonomy is strategic in nature and has a distinctly anti-U.S. bias, flowing from a view of the United States as a hegemon and a desire for an ESDP that is independent from the United States that can serve as a counterbalance to U.S. influence.
- In other European constituencies, there is a desire to maintain close ties with the United States but nevertheless also a desire for more balance in technology transfer and sharing.
- There is a European desire for operational autonomy and export flexibility—not to be dependent upon U.S. approval to either adjust or manage key systems during operations (i.e., how and when force can be used) or limit European exports of products to third countries.
- There is a growing focus in Europe (government and industry) on becoming ITAR-free in defense products, programs and capabilities. While EDA does not expressly espouse an ITAR-free move, one of the EDA’s second-level goals for the European industrial base, as noted above, is “[l]ess dependence on Non-European sources for key technology.”¹⁹⁵ EDA and EC officials expressed the position that the EC is not acting against ITAR. Rather, in their view, ITAR forms its own barriers.

Rebalancing the U.S.-European Defense Trade. Another core motivation or impulse that permeates the EU rhetoric and to some extent reality of the EU initiatives is concern over a “rebalancing”—that is, redressing the apparent trade imbalance in defense goods and services between the United States and Europe (the lack of a so-called “two-way street”).

EU reports, speeches and documents are replete with this theme. For example, a 2005 Commission Communication on the defense industry expressly stated that:

¹⁹⁴ For a full discussion of this, see J. Bialos, S. Koehl, D. Catarious, and S. Spaulding, *Ideas for America’s Future—Core Elements of a New National Security Strategy*, Chap. 16 (pp. 415-459) (June 2008).

¹⁹⁵ EDA presentation to this study team, on *EDA Initiatives in the Field of Defence Procurement and Defense Industry*, Jan. 25, 2008.

Stakeholders also expressed their concerns about the conditions of access to the EU market, particularly in view of the unbalanced situation with certain third countries. They expected all measures taken at EU level to favour reciprocal access, in particular with the United States, and stressed the need to strengthen the competitiveness of EU industries on world markets.¹⁹⁶

Similarly, the December 2007 EC Communication that announced the Defense Package directly reflected this view of imbalance. It states as follows:

[D]espite the clear domestic preference, a significant part of Europe's defence equipment is imported, especially from the United States. While most European markets are open to U.S. manufacturers, European producers often find a closed door when trying to export their defence goods to the United States.¹⁹⁷

Consistent with these themes, EC officials told the study team that once the EU can “get its own house in order” through the defense package and other measures, it then will be in a position to negotiate with the United States—that is, to seek more reciprocal market access. This may be an understandable view from an EU that is a substantial player in international trade matters and an emerging global power. There is also a palpable undercurrent that too much of the European defense budget euros have been flowing to the United States in the past, and that it needs to change that if the EU wants to have its own stronger, more technologically credible industry.

To be sure, the EU institutions are far from monolithic in their views on an integrated EU defense industry. They are composed of citizens who all come from Member States and, hence, have multiple views even to a person. However, there is a phenomenon (as in Washington, D.C.), of EU-assigned people tending toward becoming EU-philes who, over time, are more aligned with the EU-centric viewpoint and need for EU structures and policies. Many people assigned in the EC or senior EU committee positions have worked for years to shape the vision and reality of the EU's defense industry market and its future. The leadership in the EC Directorate Generals today includes several professionals very seasoned in defense industry matters who hold strong views, and are able to contribute increasingly with great skill in defining and overseeing policies. Today more than ever the positions of power in Brussels are influential across the European Union, and the Member States—and the United States—must increasingly attend to them as a governmental power in their own right.

* * *

In sum, a mix of impulses or motivations are behind the move toward a European defense market and industry. These same mixed messages are sometimes present in the same governments or EU institutions.

¹⁹⁶ EC Communication to the Council and the European Parliament on “The Results of the Consultation Launched By the Green Paper On Defence Procurement and on the future Commission initiatives,” p. 9 (Brussels, June 12, 2005) (Comm 626 Final). Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0626:FIN:EN:DOC>.

¹⁹⁷ EC Communication to the Council, the European Parliament and the European Economic and Social Committee and the Committee of the Regions: *A Strategy for a Stronger and More Competitive European Defense Industry*, Introduction, Dec. 5, 2007.

The Emerging Risk of Fortress-Like Conduct. The question is whether and to what degree these less benign motives—the desire for an autonomous European industry and the need for rebalancing—will drive Europe toward a preference for European buying to the detriment of the United States.

Both European government officials and European industry today largely deny movement in this direction—pointing out that current initiatives, including notably the new Directives, are internally focused and are neutral for the U.S. industry. Member States today decide whether to allow U.S. bidders and this will remain unchanged. The EDA has pro-actively stated it is not interested in, or trying to pursue, a “Fortress Europe.” Neither the EU documents reviewed nor interviews conducted for this study show EU preference. Vice President Verheugen, the EC Commissioner for Enterprise and Industry, has repeatedly said in papers and speeches that, while the United States has a more closed defense market, he is against any policy of express EU preference or closing the market to the United States.

Defense firms in general see the Directives, and the prospect of more open European markets, as constructive in nature. There is always wariness about the notion of national resources being shared with extra-national firms. U.S. firms doing business in European markets expressed a cautious view to this study team, but voice no immediate serious concerns. Some U.S. representatives expressed a view that many EU nations are already not very open to many U.S. products and doubt the new Directives will have effects on this.

Numerous governments have also expressed a desire to avoid a “Fortress Europe.” Indeed, the LOI 6 worked with the EC to ensure that the provisions of the new Directives would not jeopardize the implementation of the U.S. MoUs, and clearly express that they do not want a “Fortress Europe.” The UK is adamant that the Directives not freeze out U.S. sources.

Yet, despite these salutary developments, there are powerful countervailing tendencies toward European fortress-like conduct—i.e., favoring a shift from national preferences to a European preference. First, the traditional national behavior of European nations is to “buy national.” While this is changing today, fortress-like behavior has been the norm at the national level. Second, as Member States move toward a more European, and less national, market and industry, it is only natural that they seek a European preference. As described in the separate chapters for each nation in Volume II of this study, some EU Member States clearly express an EU preference in their acquisition sourcing priorities (e.g., National first, European second, and U.S. or other foreign third). As larger European firms and “centers of excellence” are created, it will not be surprising to see European officials take actions to support the viability of these businesses.

Finally, it is difficult to read ten years of EC Communications and reports that decry the “U.S. closed defense market” and “U.S./European defense trade imbalance” and how the EU plans to redress these, without receiving a potentially protectionist message. The new EU moves are aimed at integrating a fragmented EU industrial base, but they have an underlying philosophy in part to prefer to spend European resources inside the EU and build a strong, autonomous European defense industry in support of more robust and potentially autonomous European defense capabilities.

U.S. Actions Impact the Risk of European Protectionism. The United States also needs to take into account that our own rhetoric and policies have a bearing on European actions with respect to its defense market. For example, the selection of the Northrop

Grumman/EADS team for the tanker contract—on the heels of the selection of Transatlantic teams for Marine One Presidential helicopter and UH-145 light utility military helicopter—created the impression that the United States was willing to be more open to foreign participation in its defense market. Yet, the U.S. Government Accountability Office decision to uphold the Boeing protest to the tanker, while technical in nature, conveyed the opposite impression in Europe and has given ammunition to those constituencies that do seek to create a European preference in the proposed Directive.

Similarly, a series of other U.S. laws and policies—a rigid U.S. approach on ITAR, restrictive approaches on foreign investment in U.S. defense firms, restrictive immigration policies and constant congressional proposals to tighten our Buy American policy—also creates an impression of U.S. protectionism that helps shape European actions on its defense market and enhances the risks that Europe will move in a reciprocal and more protectionist fashion.

The Bottom Line

In sum, under any reasonable metrics, we believe the ongoing efforts to create a European defense market will continue to gain traction—with increasingly European buying on the demand side and an increasingly integrated European defense industry on the supply side. The same fundamental drivers of European integration and the growing role for ESDP discussed above—geopolitical, military and economic—apply with equal force to the European defense marketplace.

This evolution toward a European market is likely to build on, reinforce and enhance the changes in national buying habits we explored in Chapter 3 (i.e., with an increasing shift toward more inter-European competition and cooperation).

Undoubtedly, the evolution of a more open, competitive and coordinated European defense market will have fits and starts, and be mired in numerous process steps (as can be expected given the large number of Member States involved). But the prognosis is generally a favorable one and real change can be expected. As one industrialist noted, the question is one of when and how deep the change will be—not whether.

The shift toward a truly European defense market is likely to be constructive overall and reduce or eliminate redundant efforts, promote efficiency in European defense markets and also incentive further supply rationalization. Thus, overall, the creation of a European defense market is consistent with U.S. interests.

However, there is a better than 50-50 risk that, absent strategic action, the European defense market could evolve in a way that builds in fortress-like conduct by European buyers (including preferences in procurement and the shift already seen to move toward designing out ITAR-controlled articles). These developments, if they take place, would be detrimental to U.S. interests and U.S. defense firms.

The Bottom Line (continued)

Certainly, the evolving EU institutions, rules and voluntary arrangements governing the European defense market have elements that could be developed and utilized in a protectionist direction through the exercise of national discretion by Member States or by the EU itself. These could evolve to reduce U.S. market access or market success in Europe. In sum, these areas include:

- New definitions of security of supply (with ITAR as a discriminator) and security of information;
- Uncertainty whether U.S. firms will be afforded equal treatment with European competitors (in effect, will they be afforded “European” national treatment);
- Evolving European standards that could become disguised trade barriers;
- An emerging practice of designing around ITAR-controlled components and products; and
- The prospect that the EU will adopt a long-term bargaining position based on reciprocity and “rebalancing,” which links market access to European defense markets to more open access to the U.S. defense markets

Chapter 6

Policy Implications and Recommendations

The analysis above has demonstrated that government actions—laws, policies and practices—significantly affect the scope and pace of change in defense markets. A number of existing government laws, policies and practices—from exclusions from competition to off-sets to foreign investment rules to domestic content restrictions—are impediments to the development of an open and competitive Transatlantic defense market. Moreover, there are risks of other fortress-like conduct. From a U.S. standpoint, there is a real risk that the emerging European buying preference in defense markets, if left unchecked, could create and/or exacerbate divergent tendencies in the broader geopolitical relationship between the United States and its European Allies. Also, in the current global financial and economic crisis, protectionist pressures could encourage more fortress-like conduct on both sides of the Atlantic—in effect, undoing some of the more recent positive developments.

Considering the range of impediments and risks that exist today, it is clear that the development of an open and competitive Transatlantic market will be both protracted in duration and limited in scope in the absence of strategic action by the United States and European governments. Hence, the question is whether the United States, working with its allies, should take steps to sustain the positive trends underway and foster or facilitate more rapid development of a Transatlantic market or leave the matter to gradual, evolutionary change.

While this study has not addressed the larger issues of national security strategy, the relative importance of market access in defense markets and the need for possible changes in rules, policies and practices governing market access inevitably relates to and flows from a set of more strategic policy choices. In the discussion below, we therefore provide some broader context for our recommendations—recognizing that the degree of effort to put into this entire market access policy area inevitably relates back to first principles.

1. Back to First Principles: The Linkage Between Transatlantic Market Development and Strategic Policy Goals

Specifically, the evolution of a more open and competitive Transatlantic defense market is not a policy end in itself. Rather, it must be related back to first principles—i.e., our overall national security and defense strategy. *The key question is whether and to what extent enhanced Transatlantic market access facilitates arming the United States and its coalition partners with affordable, innovative and interoperable military capabilities designed to address the range of twenty-first century threats?*

Toward a Transatlantic Defense Industrial Strategy: The Historic Logic and Results

The Old Paradigm Under Stress

During World War II and throughout the Cold War, the prevailing paradigm in U.S. defense policy held that “the United States must be prepared to fight by itself and to be

prepared to supply itself during any conflict from within the domestic industrial base.”¹⁹⁸ Elements of this “old paradigm” included:

1. Largely independent U.S. defense industrial capabilities, buying primarily from U.S. sources except in limited circumstances where capabilities developed by our allies were useful; and
2. A strong aversion to technology sharing with our allies to protect our military lead.

Over the years, a range of deeply rooted U.S. regulatory structures and bureaucratic approaches developed. One result was significant U.S. insularity in defense and defense industries—a largely closed U.S. defense market and a cocooned U.S. defense industry.

As the 1990s progressed, this “old paradigm” came under pressure from various factors, including a more dynamic security environment, the globalization of the broader economy, the information revolution and the resulting rapid proliferation of technology. The significant post-Cold War decline of defense budgets and the resulting large-scale downsizing and consolidation of defense industries worldwide also changed the environment—with fewer firms competing for fewer budget dollars and programs across defense markets.

This altered economic and security environment drove defense industries in the United States and other countries to export and “globalize” to survive. Further, the 1990s wars in the Balkans highlighted real capability and interoperability gaps between the United States and its coalition partners. Simply put, our ability to fight wars together was and today continues to be limited. A sizable “investment” gap between the United States and its allies, together with a concerted failure to address longstanding interoperability problems, had created a real and growing problem.

Finally, there was the recognition that the globalization of the broader economy made our “cocoon” model unworkable—the spread of defense-enabling commercial technologies was becoming harder to control and posed both risks and opportunities. On the one hand, industrial globalization and the dispersion of technology it facilitates makes it easier for our adversaries to have increasingly sophisticated, highly lethal and disruptive technologies and weaponry—the range of asymmetric threats we face. On the other hand, greater defense industrial collaboration and cooperation with our allies can help to us to access new technologies from abroad that enable us to maintain the edge in world where technology may be a discriminator on the battlefield in the wars of the future.

The New “Supplier Globalization” Paradigm

Thus, in response to these and other dynamic factors in the defense environment, the Department of Defense (DoD) began to articulate, during the late 1990s, a fundamentally new approach for improving our ability to fight wars with coalition partners and ensuring competition in defense markets in an era of industrial consolidation.

Specifically, the Clinton Administration adopted a concerted policy of encouraging Transatlantic defense industrial cooperation—mergers, acquisitions and other collaborative arrangements. This new paradigm had several central tenets:

¹⁹⁸ Testimony of Deputy Secretary of Defense John Hamre before the Senate Armed Services Committee (Feb. 28, 2000) (unpublished), p. 9.

- Enhancing industrial cooperation and sharing more technology with our allies (while maintaining security *vis-à-vis* third parties) would improve interoperability and encourage coalition partners to close their technology gaps with the United States. Weak links in the coalition leave all members vulnerable.
- More open and competitive Transatlantic defense markets would enhance competition, and the affordability and innovation it could bring, and also lessen incentives for defense firms to proliferate in other markets.
- The United States would share more technology with close friends in exchange for their agreement to “level up” their practices in sharing technology with third countries.

DoD officials believed that encouraging bottom-up industrial teaming—compared to more top-down cooperative efforts of the past—would translate to more effective collaboration on market-driven programs and projects where there was real demand on both sides of the Atlantic. The idea was that such Transatlantic teams could be encouraged to come forward with solutions to longstanding interoperability/capability problems. Overall, a more integrated Transatlantic market with real competition could potentially foster pooling of research and development (R&D) and other costs, eliminate costly and duplicative national efforts, and yield economies of scale.

The Role of U.S. Arms Sales. Interestingly, this Clinton Administration policy was not primarily premised on the importance of U.S. arms sales to the defense industry. By and large, the economics of U.S. arms sales, while a factor in the equation, has not been a key driver of U.S. policy in this area. As discussed in Chapter 4, defense sales to Europe are today a relatively small percentage of total revenues for our larger defense firms. In economic terms, U.S. arms sales to Europe do, however, provide an important additional sales outlet for large U.S. defense firms and so help provide economies of scale and reduce per unit costs to U.S. customers. Sales to Europe also are probably more important to mid-size defense firms (especially subsystem suppliers) and dual-use U.S. firms, although the latter already have, varyingly, more success in penetrating the European markets by virtue of the more globalized nature of those product markets. Thus, a more open market can help our industry and the affordability of our own defense systems and products—but it has not been in and of itself a first level driver of policy.

The Clinton Administration took a number of steps to realize this new policy construct:

- **Declaration of Principles: A Circle of Friends.** The United States entered into bilateral, non-binding Declarations of Principles (DoPs) with the United Kingdom (UK) and Australia to address existing impediments to a more open defense market, and to put in place the regulatory hardwiring to facilitate defense industrial globalization. Initial negotiation of bilateral follow-on agreements commenced in areas such as export controls and security of supply. Unfortunately, the DoP process was initiated late in the Clinton Administration, and little tangible progress was made in terms of actual agreements.
- **Defense Trade Reform.** The Clinton Administration’s Defense Trade Security Initiative (DTSI) sought to reform defense trade controls. The DTSI included: the negotiation of U.S. International Traffic in Arms Regulations (ITAR) exemptions or waivers (similar to the U.S.-Canada waiver) with close allies who agreed to reform their own export control systems; global licensing agreements to facili-

tate significant Transatlantic projects, programs and joint industrial activities, joint ventures and the like; and a series of reforms to speed up licensing procedures and enhance process transparency. Unfortunately, these reforms were not fully implemented and in some ways proved counterproductive. Congress enacted legislation creating stringent conditions for using ITAR waivers and few firms sought to use the large licenses due to liability risks and other considerations.

- **On the supply side, the U.S. government approved a number of groundbreaking foreign acquisitions** of defense firms in the late 1990s, notably a series of BAE acquisitions and the Raytheon/Thales joint venture.
- **On the demand side, major international cooperative programs were conceived** and executed, including the F-35 Joint Strike Fighter, Medium Extended Air Defense System, a theatre missile defense system, and Multifunctional Information Distribution System, the next generation Link 16 system for secure communications and data.

The Bush Administration, in the post-September 11 era, generally did not adopt this or any activist agenda on the Transatlantic market. Rather, its actions appeared more opportunistic in nature and mixed in results. Fundamentally, the most senior leadership did not articulate a strategy about the future of the defense industry overall, let alone the degree of foreign competition or cooperation.

The shift toward a new Transatlantic paradigm thus languished—buried under other priorities from missile defense to Operation Iraqi Freedom to combating global terrorism. In the early post-September 11 period, there was some degree of opposition toward forging closer defense industrial cooperation with allies—a “circle the wagons” attitude aided and abetted by French-German attitudes toward the invasion of Iraq. In later years of the Bush Administration, while U.S.-European relations warmed somewhat, most energy was directed at essential steps on the war efforts in Iraq and Afghanistan.

In practice, a number of initiatives started in the Clinton Administration continued forward during the Bush Administration and some constructive decisions were made (especially in the second Bush term). Specifically:

- **A DoP Process Out of Steam.** DoD continued mid-level dialogues with key North Atlantic Treaty Organization (NATO) Allies, and signed additional DoPs with most of them. Today, we have DoPs in place with eight allies: five of the six LOI countries (excepting France) plus Finland, the Netherlands and Australia. However, the DoP process has largely lost its steam. DoPs were very much intended as a process, not an end point, with the negotiation of detailed, binding follow-on agreements and step-by-step market opening measures (e.g., ITAR waivers, revised agreements on industrial security, etc.). However, this has largely not occurred. Other than security of supply agreements (allowing priority allocation during exigencies) negotiated with the Italy, Netherlands, Sweden and the UK, the DoP process has not led to more concrete market opening measures. DoPs seem to have become a single end point rather than a community of countries with which we create tangibly more defense market access and closer defense industrial cooperation.
- **Lack of Meaningful Export Control Reform.** Despite an early commitment to reform, the Bush Administration failed to make meaningful changes in either

export licensing processes or a highly restrictive technology release policies (even with close allies). The Bush Administration did, as part of the DoP process, complete the negotiation of ITAR waivers with the UK and Australia in exchange for commitments from both countries to reform their own export controls. However, the Administration believed the waivers did not comply with the terms established in existing legislation and subsequently sought, but did not obtain, Congressional amendments needed to implement them.

- **The Export Treaties Were Not Ratified.** The Bush Administration proposed treaties with the UK and Australia to facilitate closer defense technology cooperation (essentially broader follow-ons to the failed ITAR waivers). Surprisingly, given the support of the UK in the Iraqi conflict, the Bush Administration failed to effectively develop a consensus in support of them. They died a quiet death in the Senate (at least for now). Whether the treaties will be ratified during the Obama Administration remains to be seen.
- **More Openness to Foreign Suppliers in Acquisition Programs.** The Bush Administration made award decisions on several weapon programs that seemingly signaled increased openness to foreign participation: the award of the Marine One Presidential helicopter, the UH-145 light utility military helicopter, and the tanker contracts to teams with significant European participation.
- **Successful Opposition to More Buy American Legislation.** The Pentagon under the Bush Administration also fought, over several years, new additional protectionist measures introduced in Congress.
- **An Aura of Restrictive Foreign Acquisition Policies.** In the foreign investment arena, the Bush Administration, through its Committee on Foreign Investment in the United States (CFIUS), developed a far more robust review process in the wake of the controversial Dubai Ports merger. While the procedural changes are constructive, the overriding effect of their new management of the CFIUS process was to create the sense that risk aversion was the U.S. policy preference in foreign acquisitions touching anywhere near the national security arena. While most CFIUS cases filed have been approved, there has been a sense that Bush policies created a chilling effect in defense and related areas. Indeed, there have been virtually no significant defense acquisitions by foreign firms until the 2008 Finmeccanica/DRS Technologies deal other than a handful of notable purchases by UK defense firms—considered the exception to the rule.

In sum, the Bush Administration, due to a lack of focus in this area and a somewhat agnostic view of toward market opening initiatives, had an inconsistent legacy with respect to developing the Transatlantic defense market.

The Growing Logic of a Transatlantic Market Strategy Today

In our post-September 11 world, one can arguably make an even more compelling case for developing an open and competitive Transatlantic defense market—with closer defense and homeland security industrial cooperation among close allies, with appropriate security safeguards.

- **Enhanced Coalition Warfare and Burden Sharing.** First, we today live in a world where coalition warfare is increasingly the norm. The high tempo of operations and range of missions (especially low intensity missions such as counterinsurgency, stabilization and reconstruction and anti-terrorism) puts a premium on working cooperatively with, and sharing the burden of collective security with, our allies. Thus, there is a higher premium on encouraging our allies to acquire the full spectrum of capabilities for these missions (civil and military) and enhancing our interoperability with them across this spectrum. A more Transatlantic market—offering joint or the same solutions on both sides of the Atlantic through bottom-up industrial solutions and top-down programs—can help facilitate these goals.
- **Enhanced Affordability.** Second, the escalating cost of weapons and the impending end of the great defense “bull market” of the last five years puts a premium on affordability—which additional competition and economies of scale can bring.
- **Enhanced Innovation.** Third, the new demands of low intensity and asymmetric conflict put a premium on defense innovation—which Transatlantic competition can foster. In an era when a good deal of the future innovation is likely to come from abroad (from India or China), we must act to ensure that the United States can continue to access the best and brightest foreign people, ideas and investments to both provide the best solutions for our war fighters and maintain our competitiveness.
- **Maintaining Competition in Consolidating Markets.** Fourth, in an era of continued defense supplier consolidation, it becomes even more challenging to maintain the competition needed to provide affordability and innovation. Allowing foreign suppliers access to national markets is a strategic tool to maintain competition and the benefits it brings.
- **Avoiding the Geopolitical Spill-Over Effects of Fortress-Like Conduct.** Finally, defense markets are linked to the broader geopolitical dimensions of the Transatlantic relationship. Allowing a European buying preference to develop unabated into a Eurocentric defense market will not benefit our overall relationship with our allies.

In sum, a more open and competitive Transatlantic market—with both cooperative demand and supply side supplier integration—is potentially one part of a holistic solution designed to achieve our goals of better coalition warfare, more affordable and innovative defense systems, and close geopolitical relationships with important allies.

Threshold Issues: Some Lessons Learned Over Two Administrations. In moving forward on this agenda, it is important to draw some lessons learned from the analysis above and policy initiatives across two Administrations.

1. **Developing an open and competitive Transatlantic defense market is not an easy task, requires senior leadership attention, and will inevitably be evolutionary in nature.** A consistent theme of this study is that governments fundamentally have powerful incentives—driven by considerations of sovereignty, security of supply, the desire to support the domestic industry—to spend their resources at home. Left to its own devices, the DoD buying community will tend to buy domestic and establish or ignore impediments to foreign participation. It requires substantial leadership attention to change this culture. Indeed, *even with strong and per-*

sistent senior leadership attention in the Clinton Administration, it was difficult to change the old and more autarctic paradigm—and share more technology with allies and facilitate the creation of greater supplier linkages. Moreover, it takes time to change deep-seated cultural and institutional attitudes—years not months. One lesson from the Clinton years—where major reforms were initiated during the last two years of the President’s second term, is that this type of paradigm shift must be started early in any Administration for it to really produce results.

2. **Developing an open and competitive Transatlantic defense market requires concerted efforts on *both* the demand and supply sides of the market; supplier globalization alone is not a panacea.** Progress can be most effectively made through a series of interrelated actions. Put another way, supplier globalization—enhanced defense industrial linkages among allies—cannot be an effective tool in the absence of a more open market on the demand side that will entertain offerings from such globalized firms. There is little point in urging Transatlantically linked firms to come forward with bottom-up solutions that promote interoperability and coalition war fighting capability acquisition unless the buyers are willing to entertain such solutions. Moreover, achieving the goals of interoperability and capability acquisition cannot be done through bottom-up supplier offerings alone. More attention is needed to create a demand “pull” in support of these goals to complement the supplier push. Notably, we have had a decade of growing and strong U.S.-UK defense industrial linkages but no real evidence that U.S.-UK force interoperability is better than our interoperability with other real allies. Thus, some top-down demand side measures to remove impediments and create cooperative demand for solutions that support our strategic goals are important.
3. **The United States should tailor our efforts to European geopolitical, budgetary and capability realities.** Years of U.S. engagement with Europeans have led to the inevitable conclusion that most European governments are unwilling or unable to increase their defense budgets or build significant high-end defense capabilities. Thus, since most of our European Allies are focusing their efforts on so-called Petersberg tasks, our industrial cooperation and technology sharing should be focused on promoting interoperability with respect to the full spectrum of forces (civil and military) needed for low intensity missions (e.g., secure communications, situational awareness and the like). Pragmatically, the United States should consider expanded cooperation and technology sharing to facilitate coalition operations with those few European countries more committed to out-of-area expeditionary capabilities for high intensity conflict (e.g., the UK and France).

The Need for a Sea Change in U.S. Engagement With Europe

As Europe moves to shift from separate national to an integrated European procurement market, a fundamental question is who in Europe the United States should engage with on these defense market issues: the European Union (EU), the LOI 6, or national governments—or all of the above. For the reasons discussed below, the United States should adopt a sea change in its approach and engage on a more systematic basis with the EU and the six LOI countries (the LOI 6) as a group, as well as with national governments, to help better shape the evolving development of European defense markets in ways salutary for U.S. interests.

A History of Bilateral Armaments Dealings. The United States has engaged primarily on a bilateral basis with respect to armaments cooperation, defense acquisition and industrial matters except for dealings with NATO and a limited number of cooperative programs. These include:

- Reciprocal procurement Memorandums of Understanding (MOUs) and other agreements such as DoPs designed to facilitate closer defense industrial relations;
- General industrial security agreements establishing reciprocal treatment on treatment of classified information;
- Export control issues, including the U.S.-UK treaty now pending before the Senate;
- Cooperative R&D agreements for specific programs; and
- Various other agreements and consultations.

These bilateral discussions and agreements reflect the fact that most armaments issues have been managed on a national basis (i.e., national governments have sovereignty and regulatory authority over these matters). Where NATO has had a role in these issues (e.g., NATO armaments programs), the United States has engaged with other Member States within a NATO context. However, the United States has been reluctant to engage with other European groupings of countries even as they have begun to take active roles with respect to European defense and defense markets.

Thus, the United States has had a limited relationship with the LOI 6, the EU or OCCAR (Organization for Joint Armament Cooperation) on defense market issues. In the case of the LOI 6, the initial decision not to directly engage with the LOI 6 as a group was a conscious one. In fact, the United States in large measure commenced DoP discussions with the UK and Australia in response to, and as a counterweight to, the formation of the LOI 6. The idea was to make sure the UK was firmly anchored to the United States as well as Europe on armaments matters. Not surprisingly, the DoP discussions focused on the *same* market access issues (investment, trade reciprocity, export controls, industrial security, and intelligence sharing) with the *same* European countries participating in the LOI addressed. Only more recently have DoD and the U.S. Department of Commerce taken some steps to engage in a limited way with the LOI 6 on offsets.

Longstanding U.S. concerns over the implications of European Security and Defense Policy for NATO have reinforced U.S. reluctance to hold discussions with the EU on defense market matters as well. Indeed, despite the EU's growing role in defense markets, the degree of the U.S. engagement with the European Commission (EC) and European Defence Agency (EDA) on these issues has been remarkably limited. Only in the last few years has there been some limited evolution in U.S. attitudes. Since the EU announced its draft EC Defense Procurement Directives in 2007, the U.S. Department of Commerce, including the Deputy Under Secretary (Industry and Security) and the United States and Foreign Commercial Service, located in Brussels, as well as DoD, has made significant first steps to engage with the EU on these matters. The United States started this dialogue through interactions with the Commission, the European Parliament, and Member States (including two recent Commerce Department-led interagency delegations).¹⁹⁹

¹⁹⁹ In early 2009, the Deputy Assistant Secretary of the Army for Defense Exports and Cooperation, after a discussion of the new Directives with this study team, became interested and visited the U.S. Mission to the EU.

In general, however, the lack of significant and sustained interaction between the United States and the EU is palpable. When this study team visited the EDA and the Commission in January 2008, the meetings had the quality of government-to-government dialogue and the sense was that we were one of the first American groups to express serious interest and hold detailed discussions with them on these issues.

Fundamentally, the U.S. reluctance to engage with the LOI 6 and EU on defense matters, and to work through a bilateral DoP process instead, reflects a desire to pick and choose which European countries to negotiate with on the basis of the degree of congruence in core policy areas such as export controls, market access and industrial security. In the U.S. view, some countries had stronger policies with respect to third-country exports and industrial espionage, and the United States trusted these countries to a greater degree with more sensitive technologies (i.e., we found the risk of diversion lower with select European partners).

Bilateral Negotiations as a “Leveling Up” Process. Accordingly, the United States historically sought to work bilaterally with those countries with which we had the greatest congruence and use the DoP process to “level up” their practices in key areas such as export controls, industrial security, market access and the like. The idea was that nations would, one after the other, seek to become members of this “club” of nations with which greater defense industrial cooperation would be allowed. Indeed, to a good degree this approach worked and countries initially clamored to be a member of the DoP “club” and get this better treatment. This approach thus allowed the United States to differentiate and afford the ability to treat different countries differently based on track records on core issues.

Avoidance of Least Common Denominator Approaches. Moreover, the United States believed that bilateral efforts are less likely to produce “least common denominator” solutions and had a better prospect for “leveling up” individual countries practices in such areas like export controls, security of supply, and the like. Understandably, there was a decided lack of desire to risk diluted standards in areas touching security. There is a considerable logic and empirical evidence in support of this view. For example, U.S. government efforts to develop security of supply arrangements (focusing on priority allocation) had gone forward within NATO for years without achieving the consensus to reach agreement. In contrast, with NATO discussions stymied, the United States initiated bilateral discussions with the UK in the DoP process and arrived at a bilateral agreement on priority allocation with the UK that served itself as a model for agreements on this subject with the LOI countries and now the EU.

The Need for a Paradigm Shift. Today, the time is ripe to change this fundamental approach for several reasons.

First, the reality is that the LOI 6 and EU are developing a more direct role and, in the case of the EU (particularly the EC and the European Court of Justice (ECJ)), a regulatory role in the evolution of the European defense marketplace. As a natural extension of continuing European integration, which the United States supports, Europe will seek to take increasingly more responsibility for its own defense and develop an autonomous European defense identity. In this context, efforts to resist the EU’s role in these areas are analogous to rolling stones uphill. This is not to say that discussions with individual European nations should be avoided. The national authorities in the European governments we examined still maintain sovereignty and regulatory authority over numerous of the issues relating to defense markets (export controls, investment controls, procurement, and the like).

Second, there is growing recognition that multilateral negotiations need not dilute standards or result in “least common denominator” solutions. A leading example of this is the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Anti-Bribery Convention), which, as described in Chapter 3, has resulted in improved standards in that arena. In short, the *issue is not multilateral or bilateral, but whether the negotiating parties see sufficient benefits in, and are incentivized to, improve standards.* Indeed, the six-country LOI Framework Agreement (LOI-FA) process has shown itself to be credible, and its results to be tangible in a number of areas. Moreover, far from serving as a “least common denominator” approach, the LOI-FA process has improved standards by participants. And, the participants do represent the countries in Europe with most defense industrial assets that probably have the most mature systems and processes and are most like-minded on many issues with the United States. Moreover, negotiating with the LOI 6 group of leading defense manufacturing nations—which have interests more aligned with the United States than do other European nations—can in some circumstances potentially lead to results that eventually are adopted in the broader EU context.

There also is ample precedent for U.S. engagement with and development of arrangements with the European Union—especially as the EU’s jurisdiction and competency has expanded in recent years. The United States and the EU have regular annual summits and deep engagement and cooperation across a range of areas as diverse as trade, transportation, communications, information technology, space and a range of other areas. The United States has entered into numerous agreements with the EU, including on issues such as the Galileo space-based navigation program.

Legal Limits on U.S.-EU Armaments Cooperation: No EU Negotiating Authority. Today, there are legal limitations that affect the U.S. ability to enter into agreements with the EU on armaments matters. In particular, the EC typically must be afforded a negotiating mandate to reach agreement with the United States or another government. And, in areas where the EU’s role is intergovernmental, any resulting agreement very well would require signatures and ratification by the Member States directly.²⁰⁰ Thus, the United States can hold consultations with the EU on defense markets but actual negotiations resulting in binding solutions will inevitably involve Member States as well in certain areas.

Of relevance here, in the public procurement arena, the EC today has the authority to propose new internal rules but lacks authority to enter into an agreement on behalf of Member States without a mandate from Member States.²⁰¹ With respect to controls over exports outside EU territory, the EC also does not have to authority to legislate—as it belongs to the so-called “second pillar” activities, i.e., only to be approved by Member States.

²⁰⁰ For example, the U.S.-EU negotiated agreement over cooperation on GPS and Galileo was negotiated by a lead EU negotiator (with Member State participation in the EU delegation) pursuant to a mandate provided by Member States; the final agreement was between the United States and Member States. In contrast, in areas where the EC has legal jurisdiction and competency afforded it under European treaties (for example, in the air transportation arena), the EU can conclude agreements on behalf of the Member States.

²⁰¹ The European Commission has the competence to regulate public procurement as part of the internal market Article 95 EC Treaty. For example, for the WTO/Government Procurement Agreement, the EC negotiates with the other GPA partners on behalf of its Member States but does not have legal personality and so cannot enter into international agreements on CFSP (Common Foreign and Security Policy) related matters. While the Treaty of Lisbon would have given the EU that legal personality. Given Ireland’s rejection of the Lisbon Treaty, the fate of the treaty remains uncertain.

A Multipronged Strategy for European Engagement

The United States should accept the reality that for matters of security and defense and the related markets, Europe is evolving a set of central bodies with their own authorities and roles. Put another way, NATO is no longer the only appropriate multilateral forum for U.S.-European engagement on security and defense matters.

Accordingly, we should not rigidly cling exclusively to a bilateral process and engagement only with NATO. Rather, we should embrace, engage with, and work to shape the EU's emerging role in defense generally and defense markets in particular in a manner consistent with U.S. interests—rather than continue to question or resist this development.

The lynchpin of the new U.S. strategy should be to engage on a bilateral and multilateral basis—with individual European nations, the LOI 6, the EU and NATO—in accordance with which counterpart has competence and authority and where engagement can be constructive in creating effective “hardwiring” and improved standards for an open and competitive Transatlantic defense market.

- **EU Consultations (the Commission and EDA).** While the EU has limited or no authority in some of these areas today and no mandate for specific negotiations, the United States should nevertheless initiate a consultation process to make our views known on key issues (e.g., the new EC Defense Procurement Directive), to seek confidence building measures to make the process tangible, and should also undertake anticipatory work in advance of any EU mandate for negotiations.
- **LOI 6 Engagement.** To the degree it proves difficult to reach agreements with the EU for legal or other reasons, the United States also could consider arrangements with the LOI 6 nations as a first step. Such discussions in a smaller group of like-minded nations can be useful as a vehicle to work through difficult issues toward developing approaches that can ultimately be “sold” to the broader EU community.
- **Sustained Bilateral Engagement.** The United States should continue to engage in national discussions and negotiations on issues managed at the national level in Europe. Specifically, the United States should revitalize the DoP process and make more tangible the larger market access benefits of DoP “membership.”

Arms Export Control Act Limitations. Finally, there also are limitations under U.S. law that would probably need to be addressed. Under the Arms Export Control Act of 1976, the President has been afforded authority to enter into cooperative R&D agreements with NATO and its members as well as non-NATO Member States that cover such matters as cost sharing on R&D, testing evaluation, joint production, or procurement by the United States of a defense article or service.²⁰² Today, however, the President lacks the authority under the Act to enter into similar arrangements with the EU.

²⁰² 22 U.S.C. § 2767.

Specific Recommendations

With these lessons learned and basic engagement strategy in mind, the following are specific steps that the Obama Administration should consider if it decides to facilitate the evolution of an open and competitive Transatlantic defense market in support of its strategic goals of enhanced coalition warfare and more affordable, innovative and faster to field weaponry.²⁰³

Recommendations for Change

Specifically, there are seven core recommendations set forth below—each of which has a number of subcomponents:

1. Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development, and Globalization Agenda
2. Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development
3. Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Procurement, Investment, and Buy National Tendencies
4. Put in Place International “Hardwiring” for an Open and Competitive Transatlantic Defense Market: Sustained Engagement with the EU and LOI and Revitalization of the Bilateral DoP Process
5. Shape Demand Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector
6. Create a Transatlantic Defense Industrial Dialogue to Catalyze Change

1. Organizing for Global Realities: Assign a Senior Pentagon Executive to Manage the Interrelated Coalition War Fighting, Transatlantic Market Development, and Globalization Agenda

The Problem: The current Pentagon organizational structure related to this agenda is balkanized in a variety of ways—which undermines our ability to effectuate our strategic policy goals:

- **There is no focused executive leadership position at the DoD with responsibility for incentivizing our allies’ capability acquisition and promoting force interoperability**—the critical enablers of coalition warfare. While various DoD components are involved in these efforts, the “ownership” of this agenda is at best

²⁰³ Since this study focuses on defense markets, we offer no specific recommendations on U.S. strategy toward Europe or developing greater coalition capabilities and interoperability. For a discussion of overall recommendations on these issues, see J. Bialos, S. Koehl, D. Catarious, and S. Spaulding, *Ideas for America’s Future—Core Elements of a New National Security Strategy*, Chap. 16 (pp. 415–459) (Center for Transatlantic Relations, Johns Hopkins University’s Paul Nitze School of Advanced International Studies, June 2008).

uncertain and fractured. There does not appear to be a uniform set of efforts to develop capability roadmaps, identify steps to enhance interoperability, ensure appropriate training with network-linked assets and outputs, and so forth.

- **There is no real apparent DoD strategic linkage of existing armaments cooperation efforts to DoD objectives for capability acquisition and interoperability.** Each Military Service has its own approach and no coherent DoD policies exist for international armaments cooperation (i.e., tying it to these specific policy objectives).
- **DoD has relatively stove-piped organizations for export control, technology release and national disclosure policy, which are key policy and acquisition enablers of coalition warfare.** For example, among other things, the Defense Technology Security Administration reports to the Assistant Secretary of Defense for Global Affairs in Policy (with no direct linkage to the acquisition community), and the Low Observable/Counter Low Observable (LO/CLO) Committee is situated under the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L). The balkanization of these responsibilities delays and complicates decision-making and precludes the development of coherent, across-the-board technology transfer policies.
- **DoD export control policies are not well connected to armaments cooperation policies.** The DoD continues to have serious intractable tensions between our efforts at armaments cooperation and our technology transfer policies. Time after time, these matters have to be addressed on programs on an ad hoc, “fix the problem” basis.
- **Foreign acquisition reviews should be linked with other key coalition warfare and export control strategies.** The responsibility within DoD for the review of foreign acquisition of U.S. defense firms is also somewhat balkanized, with one set of DoD components focused on the review of such acquisitions under the Exon-Florio law (does the acquisition threaten to impair national security) and another set focused on appropriate industrial security arrangements to “mitigate” foreign ownership, control and influence over U.S. firms with classified contracts. A larger strategy of reviewing foreign acquisitions in a context of a top-level policy that links warfare, technology release and the role of allies and friendly nations is missing.

More broadly, because of these relatively stove-piped functions and policies, the DoD has struggled to assimilate to a globalizing world. This leaves the DoD vulnerable to managing the trees but missing the larger forest: the DoD can neither recognize nor effectively manage either the security risks or the potential security benefits inherent in globalization. On the one hand, DoD needs to cope with the risks inherent in globalization and the commercial information technology revolution—which requires the maintenance of strong and sensible export controls that safeguard critical technology *vis-à-vis* our potential adversaries. On the other hand, DoD needs to enable U.S. access to foreign technology in a world where a substantial amount of innovation (commercial and military) will come from abroad in the future (India, China and elsewhere). The DoD must be able to address these challenges in a holistic manner.

Recommendation: Accordingly, the disconnects detailed above can potentially be addressed by creating an organizational structure that brings these capabilities together under one

senior DoD executive who can facilitate making balanced, overall decisions. DoD therefore should consider designating a single senior Pentagon official as the focus point for all of these globalization related matters at the Pentagon and empower that official. This official would develop DoD roadmaps for enhancing interoperability and coalition operations with our allies, and develop technology transfer, disclosure policy, and industrial relationships in support of achieving these core interoperability and coalition war fighting goals.

Bringing these capabilities together would facilitate developing holistic technology transfer policies that protect sensitive U.S. technology and information from disclosure and enable coalition war fighting, defense industrial cooperation and supplier linkages.

A core lesson from prior efforts to promote this agenda is that senior DoD leadership attention is crucial. The creation of a new executive position thus would fill this need. The executive also could engage more senior officials, including the Secretary and Deputy Secretary of Defense, as necessary and appropriate.

This executive would need to subsume relevant functions today housed in both the office of the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) and the office of the Under Secretary for Policy, including functions related to: defense export controls (Defense Technology Security Administration), national disclosure policy, defense industrial policy, international armaments cooperation and interoperability/coalition warfare related. The executive could be linked to both the AT&L and Policy organizations with dual reporting responsibilities (perhaps serving as a Principal Deputy Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) or an Assistant Secretary reporting to the Under Secretary for Policy. A detailed proposal for the functions and responsibilities of this executive is set forth in Appendix IV.

2. Step Up Armaments Cooperation in Support of Coalition Warfare and Transatlantic Market Development

As noted above, an open and competitive Transatlantic armaments market cannot develop through internal process reforms, global hardwiring, and bottom-up approaches alone. Put another way, the existence of supplier integration makes little sense without open markets on the demand side and some degree of cooperative buying. Thus, the initiation of targeted cooperative programs in support of coalition warfare development can help to “jumpstart” the market.

In the absence of a top-level U.S. strategy, little new program armaments cooperation has moved forward in recent years and there have been sustained problems in the cooperative programs underway, notably in technology transfer. Indeed, without some sustained U.S. effort at promoting cooperative engagement with Europe in ways that are beneficial to European governments, the F-35 Joint Strike Fighter program could very well be the last of its breed.

Accordingly, the DoD should develop a coherent approach to armaments cooperation to replace the current ad hoc approach and organize a concrete set of programs that advance our interests in coalition warfare.²⁰⁴ Once specific roadmaps for force interoperability with our European Allies are developed, our cooperative armaments efforts can be organized around them.

²⁰⁴ For a fuller review of possible cooperative options, see J. Bialos, S. Koehl, D. Catarious, and S. Spaulding, *Ideas for America's Future: Core Elements of a New National Security Strategy*, Chap. 17 (Center for Transatlantic Relations, School of Advanced International Studies, Johns Hopkins University, 2008).

a. Cooperative Programs Focused on Interoperability

The United States should consider joint programs or foreign participation in key U.S. enabling programs on network-centric warfare (including technology demonstrators) to facilitate interoperability. Among other things, the United States should consider fostering the development of common network-centric common architectures (rather than using proprietary standards) into which nations can “plug and play,” incorporate their own sensor outputs, and thereby achieve secure communications, similar levels of situational awareness, and other potentially higher order forms of interoperability as needed. NATO has made nascent efforts to develop a “network enabled” architecture that could be built upon to shape a more holistic approach. These types of C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) programs, which are inherently less focused on platforms that have large numbers of domestic jobs involved, also tend to encounter less institutional and political resistance.

b. Joint Programs With the EU (Civil/Military Interoperability); Needed Amendment to the Arms Export Control Act.

The United States should consider cooperative armaments engagement with the EU in defense and homeland security as well—perhaps related to civil/military interoperability in areas such as software defined radios. The relevant DoD components could work with EDA to identify areas of shared interests; arrangements between the EDA’s Joint Investment Programs and analogous U.S. programs should be considered. The United States should work with Congress to amend the Arms Export Control Act to afford DoD the authority to enter into cooperative project agreements with the EU.

3. Reform Internal U.S. Government Rules, Policies and Processes to Facilitate Development of a Transatlantic Defense Market: Export Controls, Procurement, and Buy National Tendencies

While not a focus of this study, it is well documented in numerous studies by DoD, the National Academy of Sciences and other organizations that U.S. future access to foreign technology, people, trade and capital is important not only to drive economic growth and competitiveness but to ensure a strong U.S. defense posture. In the national security arena, our military edge is in large part due to our qualitative superiority. However, while the United States is the world leader in defense spending, we do not and will not necessarily lead in either spending or innovation in all key commercial enabling technologies such as information technology, broadband communications, and robotics.

*In the future, our national security may require us to collaborate to ensure access to the enormous defense-enabling R&D abroad (a large portion of which is commercial in nature). As stated in Mapping the Global Future, a Report of the National Intelligence Council’s 2020 Project, “The greatest benefits of globalization will accrue to countries and groups that can access and adopt new technologies.... [A] nation’s level of technological achievement generally will be defined in terms of its investment in integrating and applying the new, globally available technologies—whether the technologies are acquired through a country’s own basic research or from technology leaders.”*²⁰⁵

²⁰⁵ *Mapping the Global Future: Report of the National Intelligence Council’s 2020 Project* (Washington, D.C.: National Intelligence Council, 2004). p. 11. Available at: http://www.globalsecurity.org/intell/library/reports/2005/nic_globaltrends2020_s2.htm.

Unfortunately, a confluence of U.S. policies and practices—some intentional and others unintended, some old and some new—together threaten to impair our access to foreign innovations as well as defense markets and impede our collaboration with foreign partners. Bush Administration policies ranging from immigration to export controls to foreign investment have—in the post-September 11 environment—created the impression that the United States is distancing itself from globalization rather than embracing it. Each of these policies was undertaken in the name of national security or homeland security, and often have been shaped with the best of intentions and have their own inherent logic. But the cumulative trends in these discrete policy areas are clear: the United States is making collaboration harder with even our allies—especially in important high-technology areas.

Over time, these policies and practices can put at risk American industrial leadership in critical industries and, ultimately, our national security. The danger is real and should be addressed now before the damage is severe and we are doomed to be “second best” and see our defense posture and our competitiveness erode.

Accordingly, the Obama Administration should consider giving guidance to the federal government to administer the various regulatory regimes—investment, trade, export controls, Buy American, immigration—in a manner that restricts exports, investments, and trade only to the degree needed to protect national security and brings more focus to competitiveness considerations. A series of specific reform measures should also be adopted, including the following:

a. Adopt Needed Defense Export Control Reforms (Release Policies and Processes) Early in the Administration

As we have amply illustrated in Chapter 3 and our country-specific chapters, virtually every interview conducted identified the U.S. defense trade controls as being a barrier that is significantly impeding Transatlantic cooperation and the evolution of the defense marketplace. There is no denying the legitimacy of some of these concerns. While U.S. rules, policies and practices have very legitimate purposes, they are undermining our ability to develop an open and competitive Transatlantic defense market.

The U.S. government has taken steps to ameliorate the timelines for export licensing approvals and most licenses are, after some time, approved in any event. But the process is too slow and uncertain to meet the pace needed for modern business and evolving threat responses. We must move toward a comprehensive reform with a balanced approach that safeguards those technologies, products and systems that warrant protection but allows release to our close allies in order to develop a more open and competitive Transatlantic defense market and promote interoperability among coalition forces. Undoubtedly, not all of the complaints of foreign governments and firms are accurate or can be remedied. However, there is no denying the legitimacy of some of these concerns.

Learning from the lessons of the last two Administrations, it is important that the reform efforts be undertaken early in the Administration so that they can be completed; ITAR reform is a process that takes years, not months. While the details of necessary steps are beyond the scope of this study, there are many studies with useful ideas in this area.²⁰⁶ A number of possible steps include the following:

²⁰⁶ For one set of ideas on this subject, see *Ideas for America's Future*, op. cit., Chap. 6.

- **Higher Priority to Coalition Warfare.** As outlined above, the DoD should re-orient its system to afford higher priority to coalition warfare in export-control decision-making; some technologies and systems should not be shared with allies but others should, with appropriate safeguards.
- **Seek Early Ratification of U.S.-UK and U.S.-Australia Treaties.** The new Administration should seek early U.S. Senate ratification of the treaties negotiated with the UK and Australia, which can begin to shift the export control paradigm into the twenty-first century and allow more sharing with a “trusted community” of foreign governments and firms provided that appropriate safeguards are in place.
- **Munitions List Reform.** Re-examine the Munitions List to make it a “positive” list and narrow its coverage to only those truly important military technologies not widely available globally. The idea is to create a detailed “positive” list of controlled items rather than a short list, as now exists, of all defense articles and technologies designed for military purposes. De-controlling non-sensitive items will lower the number of licenses substantially and allow government licensing officials to focus their time on a shorter list of more truly sensitive controlled articles and technologies.
- **Adjust Release Policies to Coalition Realities.** The DoD should adjust its release policies to facilitate sharing key technologies and information necessary to enable coalition operations (e.g., secure communications, combat identification, network access, software bridges, etc.) provided that recipients have sufficiently developed export control systems to warrant such release. To do this, DoD must first create realistic roadmaps of what technology and data we need to share—especially for low intensity operations.
- **One-Stop Pentagon Review.** Procedurally, consider shifting to a one-stop DoD technology transfer review that *eliminates* the need for multiple, fragmented technology transfer reviews by different entities/agencies (under one DoD component’s leadership with inputs from other Pentagon constituencies, as discussed above).
- **Better Connecting Linking Armaments Programs and Technology Transfer.** Require that up-front technology transfer plans be approved before the start of any major cooperative armaments development program relating to coalition warfare or interoperability.
- **Needed Changes in National Disclosure Policy (NDP) Decision-Making.** The DoD should establish a single, wholesale national disclosure policy for European and Asian coalition operations (again, first requiring newly developed coalition roadmaps as a guide). New NDP policy guidance should require making disclosure decisions up-front and holistically for these forces (i.e., before an exigency occurs or forces must be committed to conflict) and stress the need to make as few distinctions as possible between release policies for different coalition partners. Agreements would be reached with coalition partners to establish safeguards to address security issues.

b. Ensure Appropriate Use of Foreign Exclusions From Participation in U.S. Defense Programs

As noted above, there continues to be a significant U.S. practice of excluding foreign firms from participating in U.S. defense programs—often done in informal ways rather than in formal exceptions to the U.S. “open and competitive bidding” rules in the Defense Federal Acquisition Regulation Supplement (DFARS). While some exclusions are warranted, others may reflect a mix of protectionist and industrial base attitudes that are not appropriate. In a consolidating market, adding capable foreign competitors may potentially increase the prospects of obtaining affordable, innovative solutions. Some U.S. customers are now recognizing this and, hence, are including foreign competitors on select programs. And these competitors are in some cases winning awards (e.g., the light utility helicopter, the tanker, and Marine One Presidential helicopter).

DoD should consider addressing the exclusion issue on a more systemic basis and in a more transparent fashion within DoD (i.e., with DoD components being required to justify such exclusions). Specifically, the DoD assessment of material solution alternatives and reviews of sources potentially available should include credible foreign source bidders or teammates. Some tools that can be used for this purpose include:

- **Linking Programs to Coalition Warfare Goals.** Section 2350a of Title 10, U.S. Code and the DoD 5000 series procurement policies require the assessment of international cooperative programs at each phase of the acquisition development process. This legal base could be used to link an acquisition element of solutions to the larger strategy we propose above, based on coalition roadmaps.
- **Expanding the Competition Advocate Functions to Address Global Solutions.** Further, the DFARS Part 6, Subpart 6.5 establishes the Competition Advocate functions. Today these functions include advocacy for available commercial solutions. The DoD could work with Office of Management and Budget to broaden the Competition Advocate’s role to include available global solutions from secure and credible sources.
- **Increase Demand Pull to Access New Foreign Innovations Relevant to Defense Needs.** DoD should consider a range of actions to ensure it has visibility into, and can access, the best new foreign innovations. The new portal for non-traditional suppliers established this year by USD (AT&L) should seek foreign supplier input when making opportunity announcements and broadly advertise the availability of the portal to leading European sources and institutions. As a starting point the new portal could create an explicit relationship with the EDA and its electronic bulletin boards.
- **Link Foreign Testing to Coalition Planning.** As a key element of a new strategy, DoD should leverage the foreign comparative test program, a funded program (about \$35 million per year) managed by the Deputy Under Secretary of Defense (Advanced Systems and Concepts). This program funds the test and evaluation of mature equipment and technologies developed by coalition partners. Today a baseline requirement is that the tested item must address a U.S. war fighter requirement. With a new strategy to develop coalition roadmaps, the testing program could be refocused to testing targeted foreign capabilities and expanded to support broader testing of elements for technology transition or demonstration to reduce risk for potential cooperative program use.

c. Adopt a Balanced Investment Policy on Foreign Acquisitions of Defense Firms and Enunciate a Clear U.S. Policy on Defense Supplier Globalization

The President should adopt a more balanced foreign investment policy in which: 1) only true national security threats serve as the basis to impede or restrict investments by foreign firms; 2) business incentives of buying firms are given reasonable weight in the CFIUS review process; 3) Treasury is empowered to balance the interests involved and not merely “facilitate” solutions sought by each separate security agency. The policy changes recommended here do not require legislation, but can be executed through exercising leadership—a more judicious and balanced approach to reviewing foreign investments by senior officials.

Within this framework, the Obama Administration should enunciate a clear policy on defense supplier globalization. A high-level Administration statement by the Secretary of Defense or other senior DoD official would encourage defense firms to bring forward more collaborative foreign solutions, or more foreign content in their programs. Without it, firms on both sides will be less likely to take on the risks inherent in globalization transactions.

d. Modernize U.S. FOCI Mitigation Arrangements to Allow More Business Synergies and Lower the Costs of Doing Business While Maintaining Security

As fully discussed in Chapter 14, the basic mitigation agreements being used by the Defense Security Service (DSS) to mitigate “foreign ownership, control and influence” (FOCI) were developed decades ago and have not been modified to adopt to twenty-first century business models. Moreover, DSS uses the FOCI mitigation agreements in a cookie-cutter manner, with few or no adjustments relative to the industrial setting or security environment. While foreign firms have learned to live with these relatively inflexible models, these antiquated structures nevertheless impose significant administrative costs and burdens beyond what is probably necessary to protect security in some situations, and limit business synergies and innovations that could otherwise result. Rather than facilitate globalized defense firms, the current structures result in largely standalone national business units—which adds cost and are the antithesis of a globalized firm. While the National Industrial Security Program Operating Manual (NISPOM) has been updated recently, the changes do not address these basic concerns.

Accordingly, DoD should conduct a review toward adopting a more flexible approach that maintains security and revising the NISPOM accordingly. The review process should include obtaining input from core constituencies, including firms operating under FOCI mitigation agreements, outside directors, and the DoD customer community that has been doing business with such firms. Core principles should include:

- The tailoring of FOCI negation security mechanisms to business collaboration and integration to the extent possible without compromising security; and
- The replacement of the current standardized FOCI mitigation arrangements with a more flexible approach that takes the variegated nature of twenty-first century industries into account and shapes security measures depending on each case, including the track record of the country and company involved.

These principles signal that the U.S. government has moved beyond the one-size-fits-all approach in practice to adopt hybrid approaches that fit the circumstances.

In amending the NISPOM, the following ideas should be considered as well:

- Limit the use of voting trusts and proxy arrangements to cases where a designated senior DoD official makes an affirmative finding that nothing less is suitable to protect national security.
- Modify the National Interest Determination (NID) requirement for participation of foreign firms in contracts above the secret level to ensure its use only where necessary to ensure security.²⁰⁷
- As discussed below, one additional approach is the negotiation of new government-to-government industrial security agreements that put in place certain safeguards, including strengthening of national systems of our allies, to facilitate our ability to rely on other nations' laws.

e. Oppose Buy American Legislation

DoD should sustain its policy to oppose expansion of Buy American laws, and work to limit or eliminate unnecessary domestic restrictions on specific types of products or materials—unless DoD senior leadership determines such restrictions are vital to national security.

4. Put in Place International “Hardwiring” for an Open and Competitive Transatlantic Defense Market: Sustained Engagement With the EU and LOI and Revitalization of the Bilateral DoP Process

The United States should more comprehensively engage with Europe on market access impediments to ease insecurities, “level up” standards and harmonize practices. The agenda should include: market access, industrial security, export controls, procurement, R&D, the development of the defense industrial base, offsets, security of supply and technical standards. The degree of engagement and opportunities for concrete action will vary over these subjects and over time. While dialogue can be useful, real change will be an interactive, step-by-step process, with greater transparency and confidence-building moves on both sides of the Atlantic building toward an interdependence and the “security of supply” it generates.

²⁰⁷ One idea includes requiring an NID only for the first two years a company is operating under a Special Security Agreement (SSA) for firms in countries with DoPs in place (which reflect congruent policies and practices in core areas). Thereafter, there would be a presumption that the NID requirement will be removed unless there is a finding that “national security requires otherwise.” A periodic two-year review thereafter would determine whether to maintain such an NID exemption. This approach ensures that firms with a good security track record in countries with congruent practices will no longer be subject to this onerous requirement unless absolutely necessary. On the other hand, if the firm has had problems operating under the SSA, has been found to be in violation of export control rules, or other serious security issues arise, these would justify maintaining the NID. Another option is to afford companies operating under an SSA the right to obtain an NID whether or not the government sponsor agrees, and require that NIDs be completed prior to contract award for SSA companies bidding on contracts involving access to proscribed information.

a. U.S.-EU: A Focus on Procurement, Industrial Policy, Standards and Export Controls

- **An Early Focus on Avoiding the Development of a European Procurement Preference.** The USD (AT&L) and Service acquisition organizations should engage with EDA and EC with respect to common areas of interest in defense acquisition policies and processes. An early focus should be on an elevated and sustained U.S. dialogue with the Commission and EDA as well as with national governments to ensure that the final EC Defense Procurement Directives and any new rules or policies on European acquisition are not interpreted so as to create either an explicit or inherent “European preference,” and are implemented in a manner consistent with existing international agreements (e.g., the reciprocal procurement MOUs), international trade law principles on government procurement generally and U.S. interests more generally. The EC will likely take the view that it has no negotiating mandate at this time, and the issue of how Member States treat third countries is left for them to decide. However, the EC and ECJ ultimately have responsibility for the Directives and their interpretation by Member States. Hence, discussions with the EU, even if not in the nature of formal negotiations, nevertheless are appropriate at this time.
- **Relationship to Bilateral Procurement MOUs; Extending the EC Defense Procurement Directive to U.S. Firms.** The United States should highlight two issues with its European partners. First, the United States should make it clear that the adoption of European preferences, explicitly or implicitly, would be viewed as contrary to the MOUs. Second, the United States also should consider requesting that European governments extend the benefits and rights under the EC Defense Procurement Directive to U.S. firms (putting them on the same basis as other European firms). The MOUs are precisely designed to ensure reciprocity and contain national treatment principles. If the EU and its Member States fail to seriously consider these issues, the United States could reevaluate the benefits and costs of the MOUs and whether they still are in U.S. interests.
- **EU Consultations on Industrial Base Policies.** The DoD (specifically, the Deputy Under Secretary of Defense for Industrial Policy) and EDA should commence a dialogue on defense industrial base policies (with possible working groups), focusing on such issues as supplier globalization, ways to assess industrial capabilities and consolidations, approaches for dealing with overcapacity, and vulnerable/fragile industries, and the broadening of access to global commercial sources with assurance of security (and many more). An ongoing agenda with planned dialogues could prove constructive and lead to outputs useful to both sides, as well as improved understanding of how to deal with one another’s positions on matters of conflict. Such working groups could include Member States if appropriate.
- **EU Consultations on Technical Standards.** As the EU identifies technical standards for defense articles beyond the NATO Standardization Agreements, DoD should engage with the EDA (and NATO) to ensure that such standards remain consistent with international trade norms and do not become technical barriers to defense trade.

- **Export Controls and Security of Supply Issues: A Multifaceted Approach.** The United States should address export licensing issues that arise with respect to the new EC Transfers Directives and their implications for U.S. firms—i.e., the prospect that reliance on ITAR licensed products creates “insecurity” in the supply chain to the detriment of a bidder in a European procurement. The State Department’s Directorate of Defense Trade Controls (DDTC) and the DoD should encourage the EU to avoid this type of approach. Toward this end, the DDTC, which has jurisdiction over ITAR, should directly engage with the EC on its Transfers Directive. (Note: In practice, DDTC has had little engagement to date with the EU on these issues.)

b. The LOI 6: Offsets, Domestic Performance Requirements (Formal and Informal), Industrial Security and Intellectual Property

- **Offsets and Domestic Performance Requirements.** On these difficult issues, the United States should build on efforts to date and develop a sustained dialogue with the LOI 6 and other like-minded countries (Australia and Japan) in order to develop disciplines and limitations on the use of offsets and informal requirements. In concert with the new EDA Code of Conduct on Offsets, a reinvigorated effort may result in more discipline and, over time, the gradual phaseout of offsets. Once meaningful approaches are adopted by this small group of nations, the talks could be broadened to include other EU members or other countries (such as Central European buying nations, who today strongly support offset policies).
- **Industrial (Information) Security and Intellectual Property.** To level the playing field and facilitate cooperation, the United States should explore mutual recognition agreements and ways to harmonize practices on industrial security and intellectual property with the LOI 6 nations as a group. The LOI implementing arrangements in place on these issues in Europe can serve as a point of reference. Entering into agreements on information security can help to avoid the prospect that EU Member States can discriminate against U.S. firms on this basis under the EC Defense Procurement Directive.

c. Renewing the DoP Process

The United States should reinvigorate and revitalize the bilateral DoP process by seeking specific follow-on agreements in key subject areas with DoP partners as warranted on a country-specific basis that creates broadened mutual market access. The priority focus should be on key partners in expeditionary actions, and on those issues that pose the greatest impediments. The DoD should make more tangible the benefits of DoP membership and incentivize countries to changes their policies and practices so as to get the benefits of these expanded market access benefits.

- **The United States should focus its dialogue on foreign investment, offsets, performance requirements and export controls and seek broadened market access agreements with key allies.** This study has found indications that the investment climate in France, Germany and Italy is not hospitable to U.S. ownership of defense firms and that offsets and informal or implied domestic content

requirements are among the most serious market access impediments. Accordingly, the United States should consider broader bilateral market access arrangements with key allies that go beyond existing reciprocal procurement MOUs with relevant countries to address these issues. These would include phasing out formal offsets and more informal domestic performance requirements as well as investment limitations in exchange for additional market opening actions. These types of practices, which relate to underlying security of supply anxieties (as well as concerns over maintaining a viable domestic industrial base), undoubtedly cannot be terminated overnight. But a series of confidence-building measures on a bilateral basis might lead to their gradual phaseout, with conditions on their use.

- **The United States should consider more in-depth bilateral industrial security arrangements with DoP countries to facilitate a shift, where appropriate, away from current FOCI mitigation arrangements.** With DoP countries that have congruent standards and practices in export controls and other areas, the United States should consider changing its industrial security approach: placing greater reliance on that nation's industrial security rules where appropriate national safeguards are put in place, and developing more flexible models for mitigation arrangements where foreign ownership is involved (in place of existing special security agreements, proxy agreements, etc.). The United States can offer these measures as part of the broader market access agreements noted above.
- **The United States also should continue the current process of negotiating bilateral security of supply agreements with European Allies such as Finland, France, Germany and Spain.** This is the one area where the DoP process has produced practical results, and the United States should continue to put in place bilateral agreements on priority allocation with other DoP countries.
- **Export Control Consultations.** In general, the United States should still continue to engage bilaterally on export controls with DoP countries, which have maintained their national prerogatives in this area, and encourage these countries to “level up” their export control processes and practices in areas such as the treatment of intangibles and so-called “deemed exports” through in-country technology release to foreign nationals. As discussed above, the U.S. willingness to share more technology with European Allies and agree to broadened market access should be accompanied by stronger European export control practices—this is the nature of the trade.

d. Addressing Security of Supply Anxieties Through Interdependence

In undertaking this range of discussions with the EU, the LOI 6 and national governments, the United States should directly discuss with its European counterparts “security of supply” anxieties—a central issue affecting the creation of an open and competitive market. Europeans have long been focused on a generalized risk that a foreign supplier, subject to its host government's policies, can be made to curtail available supply of a system or product to a foreign government customer—there are examples of this occurring in practice. European concerns over this area are very real—as manifest in intra-European agreements, including the LOI, the LOI Framework Agreement, and implementing arrangements, designed to address these issues with other European countries.

To a large degree, however, the notion of sovereign guarantees is not susceptible to a meaningful international agreement. As a legal matter, the United States and many other countries are not in a position to provide such guarantees. A host of U.S. laws—from export controls to economic sanctions—afford the U.S. government the ability to cut off foreign supply. Even if those laws could be amended or the U.S. Senate were willing to ratify a treaty that superseded them, the fact is that any sovereign government could, if it so chose, act to interrupt a supply contract at any time notwithstanding any prior written agreement. Hence, the requirement in the Framework Agreement that the Parties shall not “hinder” the supply of defense articles and services produced, assembled or supported in their territory, to the other LOI parties²⁰⁸—is of questionable value.

As a practical matter, while agreements with assurances might provide some comfort, the real protection against such sovereign action is not in any legal guarantee, but in reciprocity borne of mutual interdependence. Dependence does not necessarily imply vulnerability in today’s age of increased security cooperation. In fact, the best salve is growing *interdependence* and cooperation—with step-by-step confidence-building measures. Gradually, as a Transatlantic market develops, with more cooperation and competition, this type of concern should gradually ease as confidence grows. Indeed, there has been movement in this direction. The United States today is dependent on numerous foreign suppliers for the F-35 Joint Strike Fighter—a core element of our future Air Force fleet—and for new rotary platforms such as the light utility helicopter and Marine One Presidential helicopter. European governments are likewise dependent on the United States for certain capabilities. These interdependencies will create additional comfort on this key anxiety.

5. Shape Demand Side Measures With Arms-Buying Nations to Curb Illicit Foreign Payments in the Defense Sector

In the absence of robust demand side actions, Western suppliers will continue to face pressures to make illicit payments from government buyers in transitional and developing countries. The reported prevalence of bribery and corruption in the military sectors of developing countries in Asia, South America and transitional countries of Central and Eastern Europe reflects deeply rooted and systemic problems endemic to these societies: the lack of accountable, transparent, modernized government institutions, and underdeveloped nature of law and legal institutions (including anti-corruption laws and appropriate judicial enforcement mechanisms).

Lack of Demand Side Efforts Specific to Defense Markets

As discussed in Chapter 3, there is a significant need for attention to the demand side of corruption in defense markets. While supply side efforts like the OECD Anti-Bribery Convention are useful, the achievement of meaningful results in stopping the practice will require more systematic efforts to curtail the demand for corrupt payments by addressing the underlying institutional problems noted above and the perverse incentives they create.

On the demand side, the World Trade Organization, the World Bank, regional development banks, the International Monetary Fund, and the OECD have encouraged increased focus on anti-corruption activity in their international programs, and have developed stan-

²⁰⁸ LOI Agreement, Art. 6(1).

dards for budgetary transparency, bank lending, corporate governance, and public procurement, including international contracting. There also have been a series of regional anti-corruption efforts, including the Inter-American Convention Against Corruption, the Council of Europe Criminal Law Convention on Corruption, the Stability Pact for Southeast Europe Anti-Corruption Initiative, and similar efforts to develop standards in Asia and Africa.

Nevertheless, virtually none of these demand side efforts have offered any specific focus on the defense sector—despite, ironically enough, the high percentage of payments alleged in defense contracts. While Transparency International has done some work in this area and encouraged holistic efforts by foreign procurement authorities, civil societies and bidding firms,²⁰⁹ there is a lack of substantial efforts by governments and international institutions.

This clear lack of focus on illicit payments in defense markets reflects several things. First, there is a sensitivity about addressing the defense and military sector, which in some countries has a significant role in governance and society beyond addressing external military threats. Second, to a large extent, international financial institutions and bilateral U.S. assistance agencies are barred from providing funds to foreign military or defense sectors. Thus, because of these legal prohibitions, none of the diagnostic tools used effectively in civilian sectors in numerous countries have been employed in the national security sectors. Hence, policy-makers in these countries do not have an analytical basis on which to assess the depth of the problems they face and create priorities.

Finally, the lack of focus on corruption in defense markets reflects the lack of engagement by the U.S. DoD and Defense Ministries in major exporting nations. To this day, there is no office at the Pentagon with responsibility for these issues; the United States apparently provides military assistance with a relatively “blind eye” to these corruption issues.²¹⁰

Hence, the United States should work its with allies to develop a more robust demand side agenda to address payments in the national security sectors. The prevalence of corruption in these important sectors reflects a series of underlying problems that affects global security in ways far beyond the boundaries of this study.

The tools at the disposal of governments and international organizations to address these issues include: the use of diagnostic surveys to identify priority areas for reform; reform of the armed services in affected countries (modernizing functions, improving pay scales, establishing accountability and oversight, and the like); consultations with the business community and other elements of societal institutions to reach a consensus on reform matters; dialogues among the United States and other governments and international institutions; and the use of technical assistance to draft laws and to provide training.

²⁰⁹ Transparency International UK has undertaken initiatives concerning defense procurement. See generally “Addressing corruption and building integrity in defence establishments,” Transparency International UK (Working Paper, 2007), http://www.defenceagainstcorruption.org/index.php?option=com_docman&task=doc_download&gid=74. Among other things, TI has utilized “Integrity Pacts” in several countries (e.g., South Korea, Colombia) to commit procuring agencies and bidders to anti-corruption pledges.

²¹⁰ In the late 1990s, some initial efforts were made at DoD in this arena. DoD’s Industrial Affairs office began dialogues with Ministry of Defense officials of friendly foreign governments and major foreign defense contractors on the need for “leveling up” in this area if they wanted to participate in the U.S. market. Moreover, in several major transactions, the DoD sought and in fact obtained assurances of compliance efforts in this area by major foreign defense firms in the context of particular “globalization” transactions. Outside of these ad hoc efforts by the Industrial Affairs office at DoD, however, there has been no institutional focus at DoD on these issues (other than a focus on the narcotics problem in the context of Latin American policy).

6. Create a Transatlantic Defense Industrial Dialogue to Catalyze Change

Governments alone by no means hold all the answers; private sector engagement and action is crucial to creating a more open and competitive Transatlantic defense industry. One approach to consider is the creation of a Transatlantic Defense Industry Dialogue (the Dialogue) among senior executives of the U.S. and European industry and senior government leaders, including representatives of NATO, the EU, and the national governments involved in the Five-Power meetings (United States, UK, France, Germany, and Italy).

The Dialogue could be a private forum organized by the business community—not “owned” or managed by governments—that is designed to:

- Facilitate developing and maintaining a robust, competitive and integrated Transatlantic defense industry to meet the mutual security needs of the United States and its coalition partners; and
- Encourage Transatlantic defense industrial cooperation and linkages and promote interoperability of coalition forces and open and competitive markets.

The Dialogue could potentially be a vital catalyst for the agenda set forth in these Recommendations and in promoting private sector solutions and collaboration in the context of a secure environment. The Dialogue would be an informal process. The industry leaders from both sides of the Atlantic would work together to develop real-time, practical and results-oriented approaches and innovative industry-driven solutions and present them to DoD, other Five-Power governments, NATO and the EU.

Among other things, the Dialogue would focus on: 1) identifying the impediments to Transatlantic defense industrial cooperation and proposing concrete and specific measures to address; and 2) encouraging governments and institutions to take necessary actions to put in place the “hardwiring”—through legal, regulatory and other actions—to facilitate industrial linkages of all types (from mergers to joint ventures to joint programs) and avoid “Fortress Europe/Fortress America” tendencies. Additionally, the Dialogue could share “best practices” and approaches for defense firms to use in developing effective Transatlantic industrial linkages within an improved enabling environment.

With the gradual evolution of a Transatlantic defense industry and market, the time is ripe for this type of approach. As the United States and its European Allies develop a greater focus on building coalition capabilities and interoperable forces (civil and military) for low intensity missions (such as counterinsurgency, reconstruction and stabilization), this type of business dialogue can help to develop bottom-up proposals to support these types of efforts.

While a number of possible approaches exist for developing such a Dialogue, the approach proposed here is that the Dialogue be industry-led and industry-driven, modeled after the successful Transatlantic Business Dialogue. The idea is not to create a new organization with bureaucracy, but a process designed to produce practical and industry-driven approaches for facilitating our policy agenda. While beyond the scope of this report, an additional idea is to broaden the Dialogue to include homeland security.

Conclusion

In sum, the development of a more open and competitive Transatlantic defense market can be a potentially useful policy tool for solidifying the Transatlantic relationship, facilitating coalition war fighting capabilities, and improving affordability and innovation in defense acquisition.

However, as the detailed list of recommendations above reflect, an open and competitive Transatlantic defense market will not be easy to achieve—it goes against the basic grain of national governments to protect these strategic industries and spend their funds on R&D and procurement at home and requires breaking down longstanding legal, longstanding institutional and cultural impediments.

Moreover, it is plain that the list of action items to take is long and rather daunting and will certainly take more resources than now dedicated to the task. However, some of these actions also are constructive in achieving other major DoD goals as well. And, it should be recognized that the list of action items above is something of a “menu”—some actions can be taken on a targeted basis now and others deferred until later. *Two of the most important first steps include export control reform and U.S. engagement with the EU.*

Even assuming all or some of these steps are taken, the likely “best case” scenario is a gradual evolution toward a more open and competitive market—but one that will develop quicker and more broadly than in the absence of strategic government action. And, it is not obvious that the “best case” will occur. For one thing, it is critical that our European Allies engage with us constructively in this agenda. If Europe (both the EU and its members) decides as a strategic matter to focus largely inward on fostering their own European market development—a fair prospect—it will not be possible to make material progress toward this agenda (although, as noted above, economics will gradually move it forward anyway).

Finally, it should be recognized that Transatlantic market development is no panacea standing alone. It will not automatically result in greater force interoperability or improved coalition war fighting or greater weapons affordability. This is one piece only of a larger mosaic, with other steps beyond the scope of this report, that together can help to achieve these strategic goals. This strategy will be effective only when both sides of the Atlantic commit to the underlying security and economic goals discussed herein, and are willing to apply scarce leadership resources to address the difficult underlying impediments and shift the paradigm from national defense industrial policy toward a Transatlantic defense industrial policy among a community of trusted friends.

Thus, the issue comes back to first principles, resources and the ability of senior government and private sector officials to focus on and execute this agenda. If these strategic goals are important, this agenda of action items is one way to work to achieve them.

Appendix I

Market Access Metrics and Trade Flow Analysis: A Methodological Note

I. The Market Access Matrix: A Quantified Judgment Methodology

The Market Access Matrix is an effort to create a structured approach using a “Quantified Judgment” methodology combining quantitative metrics whenever possible with qualified judgments based on analysis of underlying country policies and behaviors, as well as interviews with government, industry and military representatives in each country under study. The following is a brief synopsis of the criteria used to arrive at an access score for each of the factors in the matrix—focused on the nature of the barrier and why it undermines market access.

Tariff Barriers

Tariffs are the most direct way of showing preference for domestic production and erecting barriers to foreign participation in a market by increasing the cost of foreign goods. Tariff rates are regulated by international trade agreements entered into between the United States and its trading partners, and set forth in the World Trade Organization (WTO) and European Union (EU) tariff regimes. Bilateral agreements also can offer favorable treatment or “tariff waivers” in certain areas. Scores are awarded on the basis of the tariff regime in each country, with maximum scores awarded to those with agreements in place that eliminate all tariffs on Transatlantic trade in defense products and related dual-use products used in defense programs.

Competitive Procurement

The bedrock foundation of a market system is open and fair competition, which almost always leads to better outcomes for customers—namely, more innovative and higher quality solutions at lower prices. In the defense market, as in the general market, there is empirical data showing that program awards made competitively can lead to better outcomes for the military customer—in terms of technical quality and innovation, affordability and schedule. The term “open” generally refers to whether all parties can compete or only a certain range of bidders (for example, domestic bidders or certain selected bidders known to be the only ones qualified). The term “competitive” refers to whether the contract is awarded through a process of competition where parties submit bids and the best bid is selected. The terms are related but different. For example, it is possible to have competitive bidding where the bidding is not “open” (i.e., certain bidders have been eliminated based on nationality or other considerations).

In the United States, the procurement authority is typically the U.S. Department of Defense (DoD) or its components. In Europe the procurement authority can be the relevant Ministry of Defense, an economic ministry, or possibly a specialized procurement agency.

In defense markets, the question generally is whether government procurement authorities have structured the acquisition system to allow truly open and competitive bidding.

In the defense market, there are a number of legitimate reasons why it is not realistic to award all contracts competitively to all parties. Thus, there are a range of exceptions to open and competitive bidding.

First, it does not make sense to compete awards separately for each phase of a program's development cycle. Typically, early research and development (R&D) phases of programs are competed, with progressive down-selects to a smaller group of firms in the engineering and manufacturing development phase, and eventually to a single winner for final development and production. The costs of large programs are typically so high that it is prohibitively expensive to carry multiple firms through the entire R&D phase and procurement. Similarly, it makes little sense to separately compete production on a large contract; firms that did not develop the product would need to make a substantial investment, at customer expense, in order to produce another firm's system (and therefore, would find it challenging to match the developer's cost structure for the system).

Second, in times of emergency, it may be necessary to award contracts quickly on a sole source basis to acquire a need that must be fielded quickly.

Third, the military may be seeking specialized capabilities that exist in only one or two companies, making effective competition for a broader set of firms impossible. In such cases, the procurement authorities may hold a competition but it is not fully "open."

Fourth, the government, recognizing that some defense industrial capabilities have no civilian counterpart and require government support to survive, may choose to direct procurement to certain suppliers in order to maintain a viable industrial base in that area. Thus, governments may invoke an "industrial base" exception to competitive bidding.

Finally, there are some programs and capabilities that procurement authorities may view as too sensitive from a security standpoint to allow foreign participation (due to the types of information the contractor must possess to perform the contract, the technology involved, etc.).

Therefore, it should not be a surprise that even countries that have made competitive bidding the default position in their procurement laws and regulations nevertheless have established exceptions to the rule that afford procurement authorities the discretion to exempt the program from open and competitive bidding if certain criteria have been met, to exclude certain classes of competitors (e.g., foreign), or to limit the bidding to certain competitors.

Despite such exceptions and exclusions, the degree of fair and open competition remains the most important criteria for assessing a market's accessibility. It is perhaps the best benchmark of whether a country gives foreign firms the ability to compete in their market.

In the Market Access Matrix, competition in a given market is measured in two ways:

1. **Procurement Law and Policy.** First, each country's procurement laws, regulations and policies are reviewed and analyzed to determine the extent to which competition is mandated and how exemptions from competition are determined. This establishes a regulatory and policy foundation—the theoretical basis for competition in the market. In reviewing evolving policies, we do not simply review "paper" policies but also have considered the credibility of the policy and the likelihood it will be implemented. Certain countries have better track records than others in transforming written policies into practice. This becomes germane because in several countries examined there have been recent acquisition policy changes and it was important to assess the degree to which these will in fact be implemented.

2. Actual Major Program Procurement Awards. Second, the “major” defense program contract awards in each country between 2006 and 2008 are reviewed to determine which were awarded competitively, which were awarded by directed procurement, and which were awarded sole source. This provides quantitative, and tangible, evidence of actual market openness to be considered along with laws and policies. To provide a balanced view, we accorded equal weight to: 1) all major awards in this period (which includes awards on legacy programs that tend to dominate the market; and 2) new program awards, which helps to show changing patterns in buying practices.

Data Sources. As noted in Chapter 2, data is extracted from Documental Solutions’ U.S. and European Market Database for contract values and InfoBase Publishers’ Defense/Aerospace Competitive Intelligence Service (DACIS) Programs Database for program descriptions and history. This data includes defense systems and products only (i.e., hardware) and not awards of services or the procurement of non-defense articles by Ministries of Defense. Calculating the value of contract awards of each type allows derivation of the relative percentages of competitive and non-competitive contract awards. Documental Solutions’ database is used primarily for market forecasting; as such, it has limited retrospective capabilities, with archives extending back only to 2006. In this study, only data from 2006 to 2008 has been used, as these are based on actual contract awards. The data has been further filtered to eliminate programs from extraneous market segments, and to eliminate obvious duplications and transcription errors. While the underlying data is from Documental Solutions’ database, the analysis of it—the sorting and evaluation of the data—is ours; considerable time was expended on this effort.

“Major” Defense Programs Evaluated. In order to obtain reasonable data sets for this analysis, the “major” defense programs examined were defined in accordance with the size of the nation’s overall defense spending. For Sweden (\$7 billion in defense spending), Poland (\$7 billion) and Romania (\$3 billion), major defense programs were those exceeding \$10 million during the 2006–2008 period. For France (approximately \$50 billion in defense spending), Germany (\$37 billion), Italy (\$17 billion) and the UK (\$68 billion), major defense programs were defined as programs exceeding \$50 million a year. For the United States (with a defense budget well in excess of \$600 billion in recent years, including supplemental spending), major defense programs were defined as programs worth \$100 million.

New vs. Legacy Competitions. In reviewing the major award data, it was observed that the prevalence of legacy programs in the data that were awarded years ago; not surprisingly, these large contracts are sole source as continuing awards are made to prime contractors selected years ago (sometimes through competition and sometimes not). We therefore developed a separate set of quantitative results by deleting the legacy programs from the universe studied—this allowed us to observe the extent of competition on new programs (which also tended to shed light on whether relatively new acquisition policies fostering competition were in fact being implemented in practice).

Weighting of Relevant Factors. In developing a score for competitive procurement, two factors were equally weighted: 1) a country’s laws, rules and policies on competitive bidding; and 2) a country’s actual performance over the last three years in making contract awards. The decision to award equal weights is of course a subjective one. The thinking is that there is usually a significant lag between policy and performance in this area because of the number of legacy programs that were non-competitive. Thus, providing a 50 percent

weight to the policy as distinct from the practice appeared to be a fair way to capture situations where countries have recently changed their policies to allow greater competition and there is anecdotal evidence to support this change, but the change is not really reflected yet in the data on procurement awards. The equal weighting also reflects that the study is forward-looking and seeks to project the future degree of open and competitive bidding for policy-makers.

Transparent, Fair and Non-Discriminatory Procurement Process

A key to an open market for government procurement of defense systems and products is that the conditions of competition in procurement be fair (reasonable and not arbitrary or biased), transparent and non-discriminatory (not designed to exclude participants or products on the basis of national origin). Countries whose procurement systems lack these attributes plainly produce distorted results for the customer. Such flawed procurement processes pose barriers to or exclude from consideration potential competitors or products that may be of better quality or lower in cost.

In reviewing each country's procurement system from this standpoint, the study relied on the standards set forth in the WTO Agreement on Government Procurement (AGP), a plurilateral code that is binding only on those WTO members that have voluntarily opted to join it. The AGP among other things establishes disciplines that precludes parties from discriminating on the basis of nationality with respect to covered acquisitions. To date, the United States, the European Union, including all of its members, and eleven other nations have elected to join it (as well as Hong Kong).

It should be noted, however, that the AGP requires that nations declare which government entities are subject to the Agreement's disciplines, and also allows members to exempt certain procurements under a national security exemption. Thus, in practice today, the bulk of defense procurements by signatories of the AGP have been made exempt from the AGP's coverage (although "non-warlike materials" procured by the European Ministries of Defense are generally not excluded from coverage). In the United States, all procurements by DoD, the Department of Homeland Security and the Coast Guard are covered by the AGP in theory. However, a broad range of articles procured by those agencies have been declared exempt based on national security grounds, including most major defense articles and a controversial carve-out for specialty metals.

While largely not applicable to defense markets, the standards of fair, transparent and non-discriminatory procurement set forth in the AGP nevertheless are useful benchmarks. Specifically, these key standards are as follows:

- **Public Notice.** The making public of tenders with adequate notice and in sufficient detail to help to ensure that all bidders are on an equal playing field. This helps ensure that the rules of the procurement are available to all competitors and that the procurement authority will not unfairly exclude some parties or only selectively make key information available.
- **Technical Specifications.** The descriptions of the characteristics of products to be procured (quality, performance, dimensions, etc.) should be clear and specified.
- **Qualification of Suppliers.** Published conditions that are limited to those essential to ensure the firm's capability to compete.

- **Clarity of Award Criteria and Rules.** The elucidation of criteria on which bids will be evaluated helps to ensure that awards are made on a fair and equitable basis rather than on the basis of some “inside” information or criteria known to only a few.
- **Fair Procedural Rules.** Procedural rules that govern the submission, receipt and opening of tenders should be transparent and subject to firm, reasonable deadlines to ensure fairness in the procurement process.
- **Objective and Unbiased Award Decisions.** The degree to which the source selection authority makes objective awards based on the solicitation or request for procurement is critical to an open procurement system.
- **Ability to Challenge Awards.** The ability of losing bidders to challenge or “protest” contract awards before some type of independent authority helps to ensure that awards are fair and follow the rules.

In developing scores for this metric, equal weight was assigned to transparent processes, on the one hand, and fair and non-discriminatory processes, on the other. Discrimination is essentially an element of whether a procurement process is fair and reasonable.

Domestic Content Requirements

Many countries require at least a certain percentage of government-procured goods to have “domestic content”—i.e., to be manufactured or at least assembled by a domestic company. The United States, for instance, has a “Buy American” Act as well as a number of other regulations with some type of domestic content requirement. Most domestic content laws are intended to protect the defense industrial base or domestic jobs from foreign competition; they also may have some type of national security rationale (e.g., to ensure reliance on domestic sources for a “strategic” capability).

However, even countries without formal “domestic content” laws will often instruct foreign companies to direct a certain percentage of project work share to domestic companies. In that sense, domestic content requirements are often an informal outgrowth of directed competition or in many situations are used to fulfill offset requirements (see discussion below). In some circumstances, countries are not mandating just any work share but are seeking that particular high-value or noble work—with significant technology transfer—be done domestically. In some countries, there are no formal laws or regulations mandating domestic content, but foreign competitors operating in those markets understand the implicit requirement and make it an integral part of their capture strategy to acquire foreign partners or subcontractors.

Domestic content requirements, formal or informal, are considered trade barriers that create inefficiencies and distort international trade by requiring the use of national suppliers that may be less efficient and national products that may be more expensive or simply inferior. Hence, they prevent the ultimate government customer for getting the “best value” for money.

There are no meaningful databases to provide insight into domestic content requirements. Rather, we have relied on a general review of each country’s laws, policies, practices and behaviors as well as interviews with relevant government officials and market participants.

In developing scores for each country, we have assigned equal weight to two factors: 1) whether the country has formal laws and rules requiring domestic content; and 2) whether

firms are instructed to direct work share to domestic firms formally or informally and/or whether there is an implicit requirement that this practice is necessary.

Offset Requirements

As noted in the annual U.S. Commerce Department report on Offsets in Defense Trade,^a “offsets in defense trade encompass a range of industrial compensation arrangements required by a foreign government as a condition of purchase of U.S. defense articles and services. This mandatory compensation can take many forms; it can be directly related to the purchased defense system and related services, or it can involve activities or goods unrelated to the defense system. The compensation can be further classified as a Subcontract, Purchase, Co-production, Technology Transfer, Licensed Production, Credit Assistance, Overseas Investment, or Training.”

Offsets are considered trade barriers because they distort the defense market and produce economic inefficiencies. From the standpoint of the government buyer and its taxpayers, offsets add indirectly to the cost of systems/products being sold because typically the costs of the offset are passed on to some extent to the customer. Also, because the buyer may select between competing systems based in part on the attractiveness of the offset package, offsets also distort the selection process and may result in governments buying “second best” solutions. The larger the offset is, the greater the distortion.

The perceived economic development benefits of offsets also may be illusory. In some cases, offsets have resulted in the creation of economically unviable enterprises that never become profitable (and never had any chance of becoming profitable). In other cases, offsets become opportunities for “crony capitalism,” with friends and relatives of key procurement officials in the purchasing country becoming officers and directors of the offset enterprises.

Offset practices have been evaluated in two ways:

- Review of the official program of each country and held discussions about it with government officials and market participants; and
- Review of quantitative data on offset practices using the Commerce Department’s annual report on Offsets in Defense Trade. Specifically, we utilized Table 2-5 in the 12th annual report, which calculates the offset countries’ offset requirements in practice as a percentage of actual contract values. The calculations use actual contract and offset data provided by U.S. prime contractors to determine 14-year averages. Prior reports were also reviewed to determine if there had been material changes in each country’s practices.

Each country’s score on offsets was determined using Commerce Department data exclusively. This was found to be the most objective source of information (and in most cases the official policy was congruent with the quantitative results). Disparities between policies and the quantitative data are indicated in individual country analyses.

^a *Offsets in Defense Trade*, Twelfth Annual Report to Congress, U.S. Department of Commerce, Bureau of Industry and Security (Dec. 2007), p. iii. Available at: <http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/offsets/final-12th-offset-report-2007.pdf>.

Juste Retour

Closely related to offsets is the practice of “*juste retour*,” by which the work share received by participants in multinational defense programs will be proportional to national investments in the program. Thus, if a country contributes 33 percent to the development of a new weapon system, it can expect to receive 33 percent of total work share value. Moreover, if a country agrees to acquire half of the production run of a new weapon system, it can expect to receive half of the total work share involved in its production. *Juste retour* negotiations can become quite complex, due to the differing levels of industrial capability among the partners in multinational development programs, as well as issues of “quantity” versus “quality” of work share.

Juste retour impedes market access by creating artificial requirements for assignment of contracts based on national origin rather than cost, capability or best value. Thus, work may be assigned to a company that is demonstrably less efficient than one or more competitors and provides a lesser widget, simply because there is a need to distribute the work share according to the *juste retour* principle.

There again is no meaningful data available on this issue. Hence, scores are based mainly on interviews of government officials and market participants, a review of major programs, and focused on the degree to which each country is moving away from a rigid *juste retour* practice in both policy and practice.

Government Ownership and Control of Defense Industries

From the rise of the nation-state, governments have always maintained state-owned and operated arsenals, shipyards and munitions factories as a matter of national security; since such enterprises were not always profitable, only government ownership could ensure the maintenance of an essential production capability during peacetime. After World War II, a number of Western European countries also nationalized large portions of their aerospace industries and private defense companies. With the collapse of the Soviet Union, and the subsequent decline in demand for defense products, governments could no longer afford to maintain these unprofitable companies, and a wave of privatization and divestment began.

In Eastern Europe, all significant businesses were nationalized after the Communist takeovers in the late 1940s. With the fall of communism, the governments of Central/Eastern European countries likewise began efforts to privatize their state-owned defense enterprises, most of which were antiquated, unprofitable and tooled to produce obsolescent Soviet equipment.

Some countries have been quite successful in their privatization efforts, but others have either consciously opted not to fully privatize these firms (a desire to maintain “control” over industrial capabilities viewed as “strategic”) or have found it difficult to do so (i.e., because the firms are not attractive to private investors). Indeed, the history of privatization of defense industries has in good measure been a history of the downsizing or closing of defense firms rather than conversion to commercial production (often a desired goal). In some countries, governments have retained ownership of older, legacy facilities but have allowed them to be operated by contractors in full or in part.

Other countries have sought to maintain a degree of control over privatized companies by retaining a preferential minority “golden shares” that entitles the government to repre-

sensation on corporate boards of directors, and (in many cases) veto power over some major areas of corporate decision-making (e.g., the retention of domestic production capabilities in certain business areas). Depending upon how they are defined, these golden shares can be a major impediment to private investment and participation in public equity markets.

Government ownership or control over defense firms is a “market access” barrier for foreign firms since home governments will tend to favor them in procurement decisions. Many government-owned firms are also subsidized, allowing them to sell products at very low prices—in some cases, lower than their actual cost of production. In short, the continued existence of companies not operating on a commercial basis undermines the operation of an open market and the price and quality discipline such a market brings.

Each country’s track record on this metric has been evaluated by assigning equal weights to two factors: 1) current government ownership (usually shareholdings) and control of defense firms; and 2) golden shares and other contractual arrangements that afford governments special rights with respect to defense firms. This information is typically available in public regulatory filings for larger, and especially, publicly traded defense firms. As there is little tangible information available on the degree to which governments, in their role as owners, do actually participate in the management and decision-making of these firms or subsidize them, we have not graded countries on this basis. Where information is available on these issues (largely through interviews with government officials and market participants), this has been noted in the evaluations of each country.

Foreign Direct Investment

In a globalized economy, capital investment knows no national boundaries—this holds largely true today in the commercial sector although regulated industries such as telecommunications and banking continue to be subject to some degree of investment restrictions. Foreign direct investment (FDI) can provide needed cross-border capital for firms to develop their business, produce business synergies and efficiencies, and open new markets to the merged firm. In complex defense markets, FDIs by strategic investors (other defense firms) also can facilitate their own cross-border market access. Through mergers and acquisitions, foreign defense firms can potentially “buy” into somewhat closed defense markets and be treated more like domestic firms.

Historically, however, governments have been reluctant to allow foreign investors to own significant interests in, or control, domestic defense companies for a mix of national security, security of supply or more overtly political or protectionist reasons. Until recently, some countries did not allow any FDI in companies deemed critical to national security (or which dealt with sensitive technology or information). Today, however, most countries allow some degree of FDI in defense firms but place limits on the degree of ownership or control. As the climate has become more open to FDI in defense, FDI has become subject to a variety of regulations to address industrial and national security concerns.

Restrictions on foreign investment in defense firms are market access barriers. As noted above, such restrictions preclude the free flow of capital and resulting benefits in terms of better and more affordable defense products and job creation and growth. In the fragmented and complex defense marketplace, such restrictions also limit the degree of defense cooperation with allies and benefits it may bring in terms of force interoperability and capability enhancement.

To examine the degree of restriction placed on foreign investment in each nation's defense industry, the study reviewed the data and documentation described below, as well as conducted interviews with market participants):

- **Foreign investment rules and processes:** the laws, rules and policies of relevant governments in reviewing and approving foreign investment—do they have clear and reasonable standards or opaque and restrictive policies, and is their regulatory process, to the extent they have one, transparent and does it apply the relevant standards in a uniform, clear and reasonable manner.
- **Track record in approving foreign investments in defense firms:** To the extent available, we have reviewed the record of each country in approving foreign acquisitions; this information is often not readily available, and even available information on formal approvals may not always be highly probative (e.g., denials can be informal in nature, such as through signals sent prior to the actual submission of an investment for approval).
- Assessment of the FDI “track record” also must include some understanding of the realities of business conditions “on the ground.” In other words, while nations might be open to selling some defense businesses, a number of factors may dissuade foreign firms from such acquisitions, including the overall market size, overall investment climate, condition of the facility, degree of corruption, the byzantine nature of the regulatory climate and difficulty in obtaining financing.

Ethics and Corruption

It is well accepted that corruption in defense markets (the payment of bribes, the presence of substantial unregulated conflicts of interest where officials can make biased decisions, and other practices) can undermine not only market access but also economic growth, the development of accountable governmental institutions, and ultimately a country's national security. Specifically, bribery can distort the procurement authorities' decision-making process; it can result in the exclusion of firms with better or more affordable solutions from consideration and can result in an unlevel playing field that affords one competitor an unfair advantage over another). Ultimate procurement decisions may not be made on a best value basis (performance, capability and cost) but on the basis of which firm can pay the highest bribe. Moreover, because the firm paying the bribe may build the bribe into the weapons system price/cost, the purchasing authority and its taxpayers suffer additional economic losses. The result of this is that the government involved can end up with higher priced, lower quality and unnecessary defense equipment that undermines its own national security, erodes the accountability of its own government, and detracts from its economic growth.

In evaluating each country on this metric, equal weight is given to two factors:

- **Domestic Ethics and Susceptibility to Bribery:** the degree to which governments in the markets studied are susceptible to receiving domestic bribery (i.e., are not subject to appropriate ethical rules and policies); and
- **Illicit Payments in Third Countries:** the degree to which governments tolerate payments made by their own firms in connection with arms sales in third countries—do their laws proscribe such illicit foreign payments, do their laws allow their deductibility from taxes, are the laws enforced, and do the practices still occur?

One might fairly ask why a country's tolerance of illicit payments in third countries by its suppliers should be a factor in considering the openness and accessibility of that market to foreign firms. Two considerations led us to consider this factor. First, to the extent a government is willing to turn a blind eye to and tolerate such practices by its firms, this reflects its own lack of commitment to the rule of law and raises questions as to whether that government is favoring these same firms in internal procurement decisions. Second, illicit payments create an unlevel playing field for foreign competitors who do not make such payments and deny such firms sales that can create economies of scale and allow them to provide better value solutions to customers in all markets. Thus, to this extent, a government's tolerance of illicit payments in third countries by its firms creates market externalities that distort the competitive process in all markets, including its own.

This is, of course, an area where it is very difficult to obtain meaningful data. Hence, the study has relied largely on several of the most knowledgeable sources of information for our analysis augmented by interviews with government officials and market participants and information available in the public record. Specifically:

- For assessing domestic ethics and susceptibility to bribery, scores are based on the World Bank's Governance Indicators, 1996-2007, relating to rule of law and control of corruption; the Bank's indicators themselves are an aggregation of existing data sets.^b
- For assessing the degree of tolerance toward illicit payments to third countries, scores are based on Transparency International's Bribe Payers Index of 30 exporting nations.^c

Discussions with government and industry representatives in each country were used to provide context for the World Bank and Transparency International data and are reflected in the individual country assessments—e.g., what forms do bribery and corruption usually take; how much does it affect the defense industry in particular; to what extent are U.S. companies affected by it; and whether this puts them at a competitive disadvantage. However, this anecdotal information was not utilized in the actual scoring.

Export Controls

The study examined two elements of export controls that relate to market access.

Export Control Regimes of European Countries. First, we believe it is important to examine the export control systems of the countries whose markets are being reviewed to assess and ascertain two matters: 1) the effectiveness of their own export control system (i.e., do they have strong systems that enable them to protect from diversion technology and products entering their market and to control exports to third countries); and 2) the degree to which their system is administratively burdensome and cumbersome.

The degree to which an importing country has a strong defense export control system, with the capability to restrict third country exports to countries of concern, gives the exporting country's government confidence in allowing its firms to export products and technology to that market. In this sense, a strong export control system can serve to facilitate the opening of that firm's market to foreign competition. To the extent that a country's

^b See World Bank Governance Indicators, 1996-2007. Available at: <http://www.worldbank.org/wbi/governance>.

^c Available at: http://www.transparency.org/policy_research/surveys_indices/bpi/bpi_2006.

export control rules are burdensome, it can operate to limit cooperation between its firms and foreign firms (thus inhibiting market access).

It soon became apparent, however, that to fully examine the export control systems of each country under review, would be a study in and of itself—and would certainly be beyond the scope of this study. It would require a review of each country’s coverage of technology as well as products, how it regulates “deemed” exports (i.e., release of technical information in country to foreign nationals), and a range of other regulatory, policy and enforcement issues. Since we lacked the resources to undertake this examination, we have only cursorily, at a top level, examined the systems of the European countries evaluated. We have reviewed whether that country is a signatory to relevant international regimes governing the export of sensitive items and high technology. We also met with export control officials in the countries examined and discussed their systems.

Accordingly, in light of the nature of our review, no weight was given to this factor in our market access analysis (although this factor is shown on the matrix in the text of the study). We also note that we have not observed any circumstances that would lead us to conclude that the export control regimes of these countries themselves constitute significant market access barriers. The regimes were not raised by U.S. firms as barriers to entry. Of course, as discussed elsewhere in this study, in a general sense, the U.S. government will likely seek improvement in each country’s export control regime as part of an overall effort to deepen defense trade and share more technology.

ITAR-Related Conduct and Policy. With respect to the U.S. International Traffic in Arms Regulations (ITAR), we have examined the degree to which it is creating obstacles to defense industrial collaboration and sales and afforded full weight to this factor in our analysis. There is no debate that this perception exists. This study does not examine the merits of the ITAR system’s various rules and policies. Rather, it has examined in practice the degree to which ITAR is impeding the ability of U.S. firms to access foreign defense markets and the extent to which foreign governments and firms are seeking in practice to avoid ITAR restrictions by pursuing other non-ITAR solutions.

Intellectual Property

The willingness of a government to afford protections to intellectual property (IP) rights (patents, trademarks, copyrights and other proprietary data) held by defense firms is certainly a factor in evaluating the accessibility of its market. Defense firms, like commercial firms, value highly their intellectual know-how—one of their principal assets—and they will certainly be reluctant to enter into contracts with defense procurement authorities that do not allow them to protect these assets.

The study did not provide the time or resources to extensively analyze each country’s IP system. Rather, the study team relied on interviews with government officials and market participants (especially the latter) to identify issues that exist in the various markets. The study does identify whether each country examined is a party to core international treaties and agreements on IP rights—which serves as an indicator of the seriousness with which IP issues are taken. The study also searched for Department of Commerce bulletins and warnings of major piracy and IP violations in specific countries to determine the extent to which existing laws and regulations are being enforced.

Questions of relevance are the degree to which defense firms are allowed to retain background rights to pre-existing IP developed prior to a project (but which is utilized by the firm in a project) and the degree to which firms must provide the government with the right to license its IP to other firms (i.e., provide it with data packages that other firms can utilize).

Technical Standards and Specifications

A final set of potential market access barriers can relate to the regulatory standards and specifications utilized by procurement agencies and their governments. Such standards, specifications and related testing requirements are needed and utilized worldwide by governments in defense and other markets. Under the WTO AGP, specifications for products to be procured should be based on international standards where they exist, national rules or recognized standards or voluntary codes.

In practice, such technical standards and specifications can potentially be utilized by procurement agencies to bias procurement in favor of particular or of domestic suppliers. Historically, there are numerous examples of these types of practices. For example, a country or community of countries may require specific information security features on software or telecommunications systems that extend beyond international standards, compliance with which would be costly and difficult for outside companies. Similarly, a country may develop a series of environmental testing factors decoupled from actual operational requirements with the intent of disqualifying outside competitors who do not normally subscribe to those standards.

Again, it was beyond the time and resources available to exhaustively evaluate each country's standards. Rather, we sought evidence of such pernicious practices largely through interviews with market participants and a review of assessments made by the U.S. Department of Commerce in its Country Commercial Guides prepared by the U.S. Commercial Services, International Trade Administration, and by the U.S. Trade Representative in its annual National Trade Estimate Report on Foreign Trade Barriers.

II. Measuring Defense Trade Flows: A Complex Task

Measuring defense trade is a challenging task because there is no one definitive source of data using consistent definitions, categories and units of measure. The International Institute for Strategic Studies (IISS) compiled fairly accurate statistics through 1995-1996, which were published annually in its *IISS Military Balance*. Since then, the Stockholm International Peace Research Institute (SIPRI) has maintained a set of online databases measuring trends in defense trade.^d However, SIPRI data is difficult to use because it employs canonical "trend" measures rather than real import/export data; and when such data is presented, it tracks only major weapon systems and not total sales of all defense goods. Although SIPRI believes that this method captures the majority of defense trade by value, it omits important elements of the defense market that need to be captured and evaluated.

To get the best possible view of defense trade, the study relied on two main sources:

- For European countries studied, export trade data was extracted from national defense export control annual reports, required by national law and the EU Code of Conduct

^d Available at: <http://www.sipri.org/contents/webmaster/databases>.

regarding arms transfers.^e These, in general, track the number and value of export licenses of all military goods as defined under the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies.^f

- For the United States, it used the Defense Security Cooperation Agency (DSCA)'s periodically published *Historical Factbook*, which provides a database that includes all sales and deliveries of Foreign Military Sales and Direct Commercial Sales for all articles on the U.S. Munitions List.^g

In compiling trade flow data, the study used actual deliveries rather than sales data. Most of the European export control reports log both licenses and deliveries. The former tend to have a much higher value than the latter as companies frequently apply for sales licenses “on spec” or for sales that are not realized. Overall, then, “deliveries” is a much more realistic measure of trade flow than “agreements” or “licenses.”

Germany, however, does not report or even track deliveries of defense goods with the exception of “*Kriegswaffen*” (War Weapons), or major end items; the total flow of defense goods covered by the Wassenaar Arrangement thus cannot be calculated from German defense export reports. Further, the value of defense export licenses granted by the German export agency appears to be an order of magnitude greater than known deliveries because licenses are valid for only one year, and must be renewed annually in the case of open-ended orders or multiyear procurements. Taken at face value, if all German licenses were converted to deliveries, Germany would be running a healthy defense trade surplus with the United States, which is not plausible. For the purposes of this study, therefore, German defense export deliveries are based on *Kriegswaffen* deliveries supplemented by an estimate of subsystem and component sales.

In some cases, our broader trade trend data is based on IISS Military balance. The full scope of what IISS data includes cannot be determined, but it is based on national budgets and so is primarily useful for broad characterization and trend information. However, notwithstanding these limitations, there are some areas where SIPRI was our best or only data source; in these instances, SIPRI is noted as the source.

Unless otherwise indicated, trade flow figures are derived by comparing deliveries reported by the DSCA to the various European countries under study, and by the figures reported in the country-specific European reports of defense export deliveries to the United States.

^e These can be found online at the SIPRI website “National Reports on Arms Control.” Available at: http://www.sipri.org/contents/armstrad/atlinks_gov.html.

^f Wassenaar Arrangement control lists can be found at: <http://www.wassenaar.org/controllists/index.html>.

^g Defense Security Cooperation Agency, *Historical Facts Book*, Department of Defense (Washington, D.C.) September 2007. Available at: <http://www.dsca.mil/programs/biz-ops/factsbook/FactsBook07.pdf>.

Appendix II

Interviews Conducted

U.S. Government Officials

Washington, D.C.

Albert Volkman

Director, International Programs
Office of the Under Secretary of
Defense (Acquisition, Technology, and
Logistics (AT&L))
U.S. Department of Defense

Barbara Glotfelty

Nancy Dolan

Contract Policy and International
Contracting
Defense Procurement and Acquisition
Policy Office
Office of the Under Secretary of
Defense (AT&L)
U.S. Department of Defense

Rodney Fabrycky

Policy Advisor for NATO and EU
Relations
Office of the Assistant Secretary of
Defense, International Security Affairs,
ISA/EUR-NATO
Office of the Under Secretary of
Defense (Policy)
U.S. Department of Defense

Charles Wray

Director of Policy for Security
Cooperation, Resources, and Exports
Office of the Assistant Secretary of
the Army (Acquisition, Logistics and
Technology—ALT)
U.S. Army

Thomas Noble

Director, International Agreements
Navy International Programs Office
U.S. Navy

Jennifer Jemio

Deputy Director, International
Agreements
Navy International Programs Office
U.S. Navy

David Van Buren

Principal Deputy Assistant Secretary
of the Air Force for Acquisition and
Management (SAF/AQ)
U.S. Air Force

Europe

Belgium (NATO & EU)

Bruce Weinrod

Defense Advisor
U.S. Mission to NATO

Richard Froh

Deputy Assistant Secretary General for
Defence Investment
U.S. Mission to NATO

Andy Gilmour

Director, Armaments Cooperation
Division
U.S. Mission to NATO

Lt. Colonel Jeff Fitch (U.S. Army)

Armaments Cooperation Division
U.S. Mission to NATO

Major Titi Soo (U.S. Air Force)

U.S. Air Force Programs
Office of Defense Cooperation
U.S. Embassy, Brussels, Belgium

Mike Ryan

Defense Advisor
U.S. Mission to EU

Rosemary Gallant

Deputy Senior Commercial Officer,
Foreign Commercial Service
U.S. Mission to EU

Isabelle Maelcamp (d’Opstaele)

Commercial Specialist
EU Funding Advisor and lead for
Procurement Directives
Foreign Commercial Service
U.S. Mission to EU

France

Colonel Michael McGurk (U.S. Army)

Chief, Office of Defense Cooperation
U.S. Embassy, Paris, France
Lt. Colonel Craig Gagnon (U.S. Air
Force)
Director, Air Force Affairs
Office of Defense Cooperation
U.S. Embassy, Paris, France

**Commander Peter Lengyel
(U.S. Navy)**

Director of Naval Affairs
Office of Defense Cooperation
U.S. Embassy, Paris, France

Commander Mack Riggs (U.S. Navy)

Director of Naval Affairs (replacing
Commander Lengyel)
Office of Defense Cooperation
U.S. Embassy, Paris, France

Germany

Colonel Bruce H. Acker, USAF

Defense and Air Attaché
U.S. Embassy, Berlin, Germany

Colonel Dan J. Stiver

Chief, Office of Defense Cooperation
U.S. Embassy, Berlin, Germany

**LTC Keven C. Kelly, Jr.
(U.S. Air Force)**

Chief, Air Force Affairs
Office of Defense Cooperation
U.S. Embassy, Bonn, Germany

Italy

Anna Borg

Department of State
Deputy Chief of Mission
U.S. Embassy, Rome, Italy

Captain Jeff Tappan (U.S. Navy)

Deputy Chief
Office of Defense Cooperation
U.S. Embassy, Rome, Italy

LTC Joseph Lask (U.S. Air Force)

Air Force Programs
Office of Defense Cooperation
U.S. Embassy, Rome, Italy

Morgan Hall

Department of State
Politico-Military Affairs Officer
U.S. Embassy, Rome, Italy

David Whiting

Department of State
Economic Officer
U.S. Embassy, Rome, Italy

Crisitano Sartorio

Department of Commerce
Foreign Commercial Service
U.S. Embassy, Rome, Italy

Poland

Colonel Stanley J. Prusinski, USAF

Chief, Office of Defense Cooperation
U.S. Embassy, Warsaw, Poland

Zofia Soviepanek-Kukuryka

Department of Commerce
Foreign Commercial Specialist
U.S. Embassy, Warsaw, Poland

John McCasalin

Department of State
Commercial Counselor
U.S. Embassy, Warsaw, Poland

Dr. Richard Olessinski

Defense Cooperation Officer
Office of Defense Cooperation
U.S. Embassy, Warsaw, Poland

Romania**Christopher Ellis**

Department of State Political-Military
Officer
U.S. Embassy, Bucharest, Romania

Colonel John Ingham (U.S. Air Force)

Chief, Office of Defense Cooperation
U.S. Embassy, Bucharest, Romania

LTC Michael Hawn (U.S. Air Force)

Deputy Chief, Office of Defense
Cooperation
U.S. Embassy, Bucharest, Romania

Blair Labarge

Department of State Economic
Counselor
U.S. Embassy, Bucharest, Romania

Mark Taplin

Deputy Chief of Mission
U.S. Embassy, Bucharest, Romania

Sweden**Karl G. Anderberg**

Defence Cooperation Officer
Office of Defence Cooperation
U.S. Embassy, Stockholm, Sweden

United Kingdom**Colonel John Ide (U.S. Air Force)**

Chief, Office of Defense Cooperation
U.S. Embassy, London, UK

Pam Tremont

Department of State
Politico-Military Affairs Bureau
U.S. Embassy, London, UK

John McNamera

Department of State
Economic Counselor
U.S. Embassy, London, UK

Colonel Daniel Rosso (U.S. Army)

Army Programs Manager
Office of Defense Cooperation
U.S. Embassy, London, UK

LTC Mary Monihan (U.S. Air Force)

Chief, Logistics Plans and Agreements
Office of Defense Cooperation
U.S. Embassy, London, UK

Jestyn Cooper

Commercial Specialist,
Aerospace and Defense
Foreign Commercial Service

Karma Job

Air Force Programs Manager
Office of Defense Cooperation
U.S. Embassy, London, UK

**European Government Officials—
Multinational & National****European Union Officials****MP EU Karl van Wagau (Germany)**

Chairman of Subcommittee on Security
and Defence
Parliament of the European Union
Brussels, Belgium

Pierre Philippe Bacri (France)

Principal Administrator,
Defence Industries
Directorate General for Enterprise
and Industry
European Commission
Brussels, Belgium

Burkard Schmitt (Germany)

Defence Expert (and primary drafter of
EC Defense Procurement Directive)
Directorate General for Enterprise
Market and Industry
European Commission
Brussels, Belgium

Pierre Lotton

Transfers Directive
Directorate General for Enterprise
Market and Industry
European Commission
Brussels, Belgium

Mr. Vitello (Italy)

Directorate General for Enterprise
and Industry
European Commission
Brussels, Belgium

Nicholas Fagerland

Directorate for General Competition
European Commission
Brussels, Belgium

Hilmar Linnenkamp (Germany)

Chief Executive (outgoing)
European Defence Agency
Brussels, Belgium

Ulf Hammerstrom (Sweden)

Director, Defence Industry and Market
European Defence Agency
Brussels, Belgium

Joachim Rohde (Germany)

Principal Officer, Defence Industry and
Market
European Defence Agency
Brussels, Belgium

Dr Stravros Kyrimis (Greece)

Assistant Director, Defence Industry
and Market
European Defence Agency
Brussels, Belgium

Arturo Alfonso Meirino (Spain)

Assistant Director, Defence Industry
and Market
European Defence Agency
Brussels, Belgium

Hilary Davis (UK)

Assistant Director, Research and
Technology
European Defence Agency
Brussels, Belgium

Arto Koski (Finland)

Assistant Director, Armaments
European Defence Agency
Brussels, Belgium

Paul Horrocks

Defense Statistics Officer, Defence
Industry and Market
European Defence Agency
Brussels, Belgium

Adrian Kendry (UK)

Senior Economist
NATO Defence and Security
Economics Directorate
Political Affairs & Security Policy

OCCAR Officials

Georges Peene

Deputy Director, Organisation
Conjointe de Coopération en matière
d'Armement
Bonn, Germany

Fernand Rouvoi

Business Development Officer,
Delegation Generale Pour l'Armement
(DGA)
Bonn, Germany

French Government Officials

Francois Lureau

Chief
Delegation Generale Pour l'Armement
Ministry of Defense

Laurent Giovachini

Adjunct for Armament (head of
Acquisition)
Delegation Generale Pour l'Armement
Ministry of Defense

Christophe Burg

Chief, Industrial Affairs and Economic Intelligence
 Directorate for Force Systems and Industrial, Technological, and Cooperation Strategies
 Delegation Generale Pour l'Armement
 Ministry of Defense

Florence Plessix

Deputy Director, Industrial Affairs Department
 Directorate for Force Systems and Industrial, Technological, and Cooperation Strategies
 Delegation Generale Pour l'Armement
 Ministry of Defense

Vincent Thomassier

Head of U.S./Canada Office
 Division of Cooperation and European Development
 Directorate for Force Systems and Industrial, Technological, and Cooperation Strategies
 Delegation Generale Pour l'Armement
 Ministry of Defense

Jean Tisnes

Head of Industrial Supervision Office
 Industrial Affairs Department
 Directorate for Force Systems and Industrial, Technological, and Cooperation Strategies
 Delegation Generale Pour l'Armement
 Ministry of Defense

German Government Officials**Henrich von Bock**

Armaments Economics and Industrial Affairs
 Ministry of Defence

Peter Scarrupe

Division Head
 Armaments Economics and Industry
 Ministry of Defense

Jurgen Mogilowski

International Armament Relations
 Ministry of Defense

Stefan Otterbach

Armaments Directorate IV 1
 Ministry of Defense

Dr. Dirk Grabowski

Diplom-Kaufmann Ministerialrat
 Ministry of Industry and Technology

Italian Government Officials**Minister G. Manfredi**

Director of Energy, Space, High Technology, and Multinational Weapons
 Lead for LOI/DoP
 Ministry of Foreign Affairs

Minister A. Perugini

Coordinator
 Energy, Environment and Defense Issues for European Integration
 Ministry of Foreign Affairs

BGEN R. Nordio**(Italian Air Force)**

Special Assistant for Acquisition Programs and Chief, Joint Strike Fighter Program Working Group
 Armament Programs Directorate
 National Armaments Directorate
 Ministry of Defense of Italy

BGEN Miniscalco**(Italian Air Force)**

Department Head, 3rd Department
 Armaments Policy
 National Armaments Directorate
 Ministry of Defense of Italy

LTC Paulo Lizza**(Italian Air Force)**

Attorney for LOI/DoP
 National Armaments Directorate
 Ministry of Defense of Italy

Polish Government Officials**Karina Glapka**

Senior Analyst, Armaments Policy
Department
Ministry of Defense

Professor Hubert Krolikowski

Director, Department of Offset
Programs
Ministry of Economy

Mirosław Kurek

Advisor to the Minister
Ministry of Economy and Labor
And Deputy Minister, Department of
Defense Affairs (Dual-Hatted)

Colonel Zbigniew Szewczyk

Deputy Director
Armed Forces Procurement
Department

BGEN Leszek Soczewica

Military Attaché
Embassy of Poland, Washington, D.C.

Colonel Rafał A. Nowak

Assistant Military Attaché
Embassy of Poland, Washington, D.C.

Romanian Government Officials**Paul Pănescu**

Director
Conventional Armaments
National Agency for Export Controls

Major General Ion-Eftimie Sandu

Deputy Chief of Armaments
Armaments Department
Ministry of Defense

Colonel Eng Marin

Chief, R&D Section
Technical Directorate
Ministry of Defense

LTC Eng. Constantin Gheorghescu (Ret.)

Counsellor
Foreign Technical Cooperations Office

Professor Eng. Doru Safta

Commander (Chancellor)
Military—Technical Academy

LTC Gheorghe Ursulean

Assistant Military Attaché
Embassy of Romania, Washington, D.C.

Swedish Government Officials**Sten Tolgfors**

Minister of Defense
Defense Ministry

Tobias Steen

Deputy Director
Department of Military Affairs
Ministry of Defense

Andreas Savelli

Principal Administrative Officer
Department of Military Affairs
Ministry of Defence

Johan Raeder

Director General for Political Affairs
Ministry of Defense

Sofia Kringsman

Political Advisor
Ministry of Defense

Jan-Erik Lovgren

Deputy Director General
Inspectorate of Strategic Products

Thomas Tjader

Senior Political Advisor
Inspectorate of Strategic Products

Richard Tornberg

Senior Legal Advisor
Inspectorate of Strategic Products

Niklas Alm

Deputy National Armaments Director
Defense Material Command (FMV)

Asa von Hacht

Acting Head
Sales & Exports
Defense Material Command (FMV)

Gunnar Hult, Ph.D.

Chief Scientist
Deputy National Armaments Director
(Deputy Director, Strategic Planning
and Development)
FMW Swedish Defence Material
Administration

Stephan Kallman

Senior Advisor
Sales & Exports
Defense Material Command (FMV)

Barbro Malmer

Commercial Advisor
Defense Material Command (FMV)

Anders Sjoborg

General Counsel
Business & Legal Affairs
Defense Material Command (FMV)

Anders Fagerstrom

Counsellor
Defense Industrial Cooperation
Embassy of Sweden — Washington,
D.C.

Nils Johansson

Senior Advisor
Defense Industrial Cooperation
Embassy of Sweden — Washington,
D.C.

Bjorn Ugglä

Defense Material Command (FMV)
Embassy of Sweden — Washington, D.C.

U.K. Government Officials**Ben Wallace**

Member of Parliament
House of Commons
Conservative party representative to
various Defence committees

David Gould

Deputy Chief Executive
UK Ministry of Defence, Defence
Procurement Agency and Chief
Operating Officer of DE&S
Whitehall

Malcom Haworth

Director General, Defence Export
Services Organisation (DESO)
UK Ministry of Defence (now in
Secretary of State for Business
Enterprise and Regulatory
Reform — BERR)

John Brosnan

Director, Business Development,
DESO
UK Ministry of Defence (now in
BERR)

Geoff Gladding

Regional Director, Europe & Americas,
DESO
UK Ministry of Defence (now in
BERR)

Robert Regan

Director
International Relations Group
UK Ministry of Defence
Defence Equipment & Support Campus

Stephen French

UK DIS primary author
UK Ministry of Defence
Defence Equipment & Support Campus

Stuart Fraser

Director
Supplier Relations
UK Ministry of Defence
Defence Equipment & Support Campus

Private Sector — By Country***Belgium*****Francois Gayet**

Secretary General
Aerospace and Defence Industries
Association of Europe (ASD)

Luigi Longoni

Deputy Secretary General
Aerospace and Defence Industries
Association of Europe (ASD)

Jean Jacques Tortora

CNES (French Space Agency) and ASD
Space sector lead
Aerospace and Defence Industries
Association of Europe (ASD)

Bill Giles

BAE, and Head of External Affairs,
Aerospace and Defence Industries
Association of Europe (ASD)

Jacques Cipriano

SAFRAN, and Aerospace and Defence
Industries Association of Europe (ASD)

Robert Bell

Senior Vice President
SAIC

Ernest Harold

Associate Partner-Business
Development Executive
NATO and Defense Industry
IBM Global Business
Services—Belgium

Brooks Tigner

Jane's Defence Weekly NATO EU
Correspondent and Director, *Security
Europe*

Isabelle Roccia

Deputy Editor and Policy Analyst,
Security Europe

France

Gilles Deschars

Vice President, Country Manager
Raytheon International
Europe—France

Yves Gallerty

Region Vice President—Chairperson
Rockwell Collins

Olivier Dubois

Commercial Director
Alcoa

Frederic Joureau

Foreign Affairs Counselor
Directorate of International Affairs
SAFRAN

Andreas Lowenstein

Executive Vice President, Strategy and
Company Development
Eurocopter

Michel Dubarry

Director General
Rolls Royce—France

Olivier Buzzi

Regional Marketing Executive
Rolls Royce

General Jean Albert Epitalon (Ret.)

Deputy Director—International
Affairs
GICAT French Industry Association

Edgar Buckley

Senior Vice President for EU, NATO
and Cooperation
Thales

Jean-Charles Boulat

European Government Contracts
Thales

Dominique Lamoureux

Ethics and Corporate Responsibility
Thales

Gareth Jones

Coordinating Manager, EU/NATO
and Cooperation
Thales

Denis Verret

Senior Vice President
Strategic Business and International
Relations
EADS—France

Francois Desprairies

Vice President Public (Political) Affairs
EADS—France

Phillipe Coq

Adjunct Director
Public Affairs
EADS—France

Pierre Lenhardt

Adjunct Director
International Relations Strategy
Boeing—France

Lawrence Casper

International Business Development
Land Combat Systems
Raytheon (U.S.-Based)

Jean Francois Briand

President
Consultant to industry and government
on U.S.-French matters
Technisa

Dr. Helene Masson

Senior Research Fellow
Foundation pour le Recherche
Strategique (FRS) (similar to an
FFRDC)

Cedric Paulin

Research Fellow
Foundation pour le Recherche
Strategique (FRS)
Germany

Alexander van den Busch

Vice President—Political Affairs
Rheinmetall AG

Dr. Thomas H.G.G. Weise

Strategic Business Development
Rheinmetall AG

Dr. Bernhard Rabert

Vice President Defense and Security
Affairs
EADS Corporate Office—Berlin

Radiger Harisch

Vice President of Business Development
Lockheed Martin Global, Inc.

Jochen Dietrich

Representative
ESG Elektroniksystem-und-Logistik
GmbH

Frank Kleinkauf

Representative
ESG Elektroniksystem-und-Logistik
GmbH

Michael Meissner

Senior Vice President-External
Relations
Diehl Siftung & Co., KG

Italy**G. Soccodoata**

Senior Vice President
Strategy and Development
Finmeccanica

Arnaldo Auletta

Head of Service, Strategic Development
Competitive Scenarios Service
Finmeccanica

Joseph McAndrew

Vice President—European, Israel,
Americas, International Business
Development
Integrated Defense Systems
Boeing

Roberto Valla

Director—Italy and Southern Europe
International Defense Systems
Boeing

Aldo Ferraguto

Defence Activities Coordinator
Italian Industry Association for
Aerospace, Systems and Defence
Academic Individual Advanced
Development (AIAD)

Massimo Mazzola

Sviluppo Business Centrale
Avio Aerospace Propulsion SpA

Paolo Bellomia

Vice President
Dema SpA

P. Mantovani

Chief Operating Officer
AEREA SpA
Milan, Italy and Arlington, VA

General B.A. Salvatore Bellia (Ret.)

Marketing
Piaggio Aero SpA

Dr. Gaetano M. Moneti

MultiConsult—Consults to Lockheed
Martin Technologies (LMT)

Giovanni Gasparini

Research Fellow
Istituto Affari Internazionali (Studies
Organization)

Lucia Marta

Researcher in Security and Defense
Istituto Affari Internazionali (Studies
Organization)

Poland

Andrzej Banasiak

Strategy Analyst Specialist
Boeing International Corporation

Richard Dickson

Managing Director, CEE and Sr.
International Account Manager
Harris RF Communications Division

Roy Pnazarella

Vice President, Central Europe/Eurasia
Lockheed Martin Company

Dabrowka Smolny

Office Manager
Raytheon International, Inc.

Ingrid Walling

Country Manager, Central Europe
Raytheon International, Inc.

Dr. Josef Sobelewski

Business Development Manager
EDS Poland

Joel E. Vila

Vice President, Eastern Europe &
Caucasus
ITT Defense International

Paul Zalucky

European Office, Warsaw
Crumpton Group

Romania

Adrian Iacob

Executive Director
Lockheed Martin Global

Aurel-Victor Nemes

General Director
C.N. Romtechnica SA

Sweden

Lars Ajaxon

Senior Advisor
Swedish Security and Defense Industry
(Association)

Lars Bjerde

Vice President & Special Advisor to
CEO
SAAB

Lars Olsson

Director of Communications & Public
Relations
Swedish Security & Defence Industry

Peter Lundberg

President and Chief Executive Officer
Swedish Security and Defense Industry

Claes Erik Frolund

President
BAE Systems C-ITS AB

Torsten A. Bernstrom

International Sales Director
BAE Systems C-ITS AB

Hans Enocson

National Executive Nordic Region
General Electric (GE)

Bertil Hellstrom

Senior Vice President
Saab International, Saab AB

Lars Jehrlander

Chief Executive Officer
SWE-DISH Satellite Systems AB

Henrik Petersson

Vice President
Export Compliance
Saab AB

Lars Tornquist

Vice President
Strategy and Business Development
Saab Microwave Systems

Pal Jebsen

Defense Industry Analyst
Partner, JKL Group

Mats Lundstrom

Attorney at Law
Boquist & Partners

United Kingdom**Blair Wallis**

Vice President—Corporate Operations
EADS UK

John Howe

Vice Chairman
UK Thales

Sam Keayes

Director of Strategy UK
UK Thales

Alberto de Benedictus

Chief Executive Officer
UK Finmeccanica

Sir Brian Burridge

Vice President—Strategic Marketing
UK Finmeccanica

Matthew Maher

Business Development Manager
UK Finmeccanica

Ian Stopps

Chief Executive Officer
UK Lockheed Martin

Geoffrey North

Director, UK
UK Lockheed Martin

Ian Wakeling

UK Commercial Director
UK Lockheed Martin

Michael Kurth

Chief Executive Officer
UK Boeing

Brian Moran

Director
UK Industrial Participation

UK Boeing

Ron Defrees

Director, Business Development
Integrated Systems
UK Northrop Grumman International,
Inc.

Mike Maiden

Director of Government Relations
BAE Systems
Farnborough, UK

Sally Roe

Partner, Dispute Resolutions
Freshfields LLP

Derek Marshall

Director Aerospace Defence and
Homeland Security
UK SBAC (Industry Association)

**Dr. Martin Trybus, LL.M., Ph.D.,
Ass. Lur.**

Professor of European Law and Policy
University of Birmingham UK

United States**Joseph H. Bogosian**

President and Chief Operating Officer
SAFRAN USA, Inc.

Dr. Steven Bryen

President
Finmeccanica Inc. (North America)

Graham Smart

Senior Vice President
Strategy and Business Development
Thales North America

Marc Bovier

Vice President for Strategy
EADS North America

Pierre Cardin

General Counsel and Corporate
Secretary
EADS North America

Appendix III

U.S. Footprints of Major European Defense Firms

BAE Systems

BAE North America today has the largest U.S. footprint of any foreign defense firm—indeed, it has been referred to as a U.S. defense firm by senior U.S. defense officials. It derives more of its revenue from the United States today than from any other market.

Today, BAE is one of the top suppliers to the U.S. Department of Defense (DoD). BAE was the ninth largest in 2006 and grew to be the sixth largest supplier to the DoD in 2007. In 2008, BAE was also listed at twelfth place in the Top Suppliers to U.S. Federal Government in information technology (IT) systems.

BAE Systems did not achieve this leading position overnight but through a series of smaller acquisitions by BAE Systems and its predecessors, including GEC Marconi, over the years. One of the most critical transactions was the BAE acquisition of the AES business from Lockheed Martin in 1999; this included the Sanders Electronics group, which included sensitive technology and classified work in electronic warfare and other areas. BAE's U.S. acquisitions continued during the Bush Administration and, most notably, included United Defense Systems, a prime level ground combat systems firm, and Armor Holdings, a provider of tactical wheeled vehicles and armor. With these recent additions, BAE Systems North America has begun to transform itself from a major subsystems provider into a prime level company in the ground combat business—with a broad spectrum of ground vehicle capabilities—capable of competing with the established U.S. “champion” in this market, General Dynamics Land Systems. BAE is thus one of the first foreign defense firms to make this shift.

Rolls-Royce

One of the leading providers of commercial and military aircraft engines, Rolls-Royce has acquired or developed a range of business units and subsidiaries in the United States to service its extensive inventory of commercial and military engines. Rolls-Royce engines power the AV-8B Harrier II (and the V/STOL variant of the F-35 Joint Strike Fighter) and, through its 1995 acquisition of Allison Engines, a wide range of military and commercial helicopters, as well as turbine-powered ships. In addition to its engine business, the company is heavily invested in energy systems, information technology, and financing. Rolls-Royce controls its operations through its subsidiary, Rolls-Royce North America, employing some 8,000 people with annual revenues of \$1.2 billion from its commercial and military operations. Among its business units are Rolls-Royce Engine Services, which provides maintenance, repair and overhaul of its Allison engines; Rolls-Royce Corporation (formerly Allison Engines), which manufactures turboprop and turboshaft engines; and Rolls-Royce Naval Marine, which manufactures propellers and drive systems, and provides system engineering services to the U.S. Navy.

GKN Aerospace

A producer of aerospace systems and components, GKN has been acquiring design, manufacturing and production facilities in the United States since the late 1990s. Among its acquisitions are GKN-Alabama (formerly Dow-United Technologies Composite Products), which manufactures large composite aerospace structures; GKN-Monitor, GKN Bandy Machining and GKN Precision Machining, producers of precision-machined aerospace components; GKN Propulsion Systems and Special Products, a provider of engine overhaul and repair services; GKN Chemtronics, a producer of lightweight aerospace structures; GKN Aerospace Engine Products, a producer of engine subsystems and components; and GKN Transparency Systems, a producer of canopy assemblies and aircraft windows. GKN does not maintain a distinct U.S. headquarters, but its operating units are controlled by two U.S.-based divisions: GKN Aerospace Aerostructures (St. Louis) is responsible for all structural systems and components; while the Precision Machining Division has responsibility for engine systems and other dynamic components.

Cobham plc

Cobham plc, a designer and manufacturer of specialized aerospace systems and components, established a U.S. subsidiary, Cobham Defense Electronics Division (CDED) in 1994 as Chelton Microwave Corporation (renamed CDED) in 2007. Since its foundation, the company has acquired a number of U.S. companies involved in defense electronics and communications, including Atlantic Microwave Corp., Continental Microwave and Tool, Inc., Kevlin Corp., REMC Defense and Space, Inc., Cobham Defense Communications, Ltd., Cobham Sensor and Antenna Systems, Sparta, Inc., Chelton, Inc., Chelton Electrostatics, Inc., Racal Antennas Ltd., and M/A-COM, Inc. Because many of these companies engage in classified defense programs, CDED operates under a Special Security Agreement with the DoD at the direction of the Committee on Foreign Investment in the United States (CFIUS). This allows CDED and its subsidiaries to carry facility security clearances and employ cleared personnel.

Meggitt Aerospace plc

A producer of high performance aerospace and defense components, Meggitt has acquired a number of U.S. companies that are controlled directly by one of Meggitt's three operating divisions (Meggitt Defense Systems, Meggitt Aerospace, and Meggitt Sensing Systems). Among its U.S. subsidiaries are Meggitt Defense Systems (Tustin), formerly Southwest Aerospace, a supplier of target systems; Meggitt Defense Systems Cartwright Products, which produces electronic range systems; Meggitt Western Design, Inc., a producer of ammunition handling systems; Meggitt Training Systems, which produces small arms simulators; Meggitt Defense Systems, Inc., which provides training systems and services to military and police; and Meggitt Aerospace Equipment, which produces hydraulic, pneumatic and fuel control valves, as well as smoke and fire detection systems for aircraft.

Serco Group

One of the leading service companies in the world, Serco Group provides facilities management, training and logistics support for military, civil and commercial organizations.

Serco's U.S. operations have expanded significantly over the past four years through its 2004 acquisition of Resource Consultants, Inc. (now Serco North America), a professional and technical services company providing IT and management services to the Federal government (including DoD) and the private sector. In 2008, Serco North America acquired SI International, Inc., another professional and technical services company with extensive contracts with U.S. Air Force Space Command, the U.S. Army, the Department of State, the Department of Energy, and the Intelligence Community.

QinetiQ Group

Formerly part of the Defense Engineering Research Agency, a UK government-owned laboratory, QinetiQ Group plc was spun off in 2001 as a privately owned company focused on high-technology research and development (R&D) activities. In 2004, QinetiQ began its penetration of the U.S. market by forming U.S. subsidiary QinetiQ, Inc. Because it intended to operate in sensitive defense-related markets, QinetiQ, Inc. formed a special "Security Committee" composed entirely of U.S. citizens; its board of directors includes both U.S. citizens and British nationals. In 2004, QinetiQ acquired the high-technology research company Foster-Miller, Inc., manufacturer of robotic vehicles and advanced armor systems; and Westar Aerospace and Defense, an engineering consulting company. In 2005, QinetiQ acquired Apogen Technologies, specializing in network systems engineering for DoD and civil government agencies; Planning Systems, Inc., specializing in network-centric systems. In 2007, it acquired Automatika, Inc., and Applied Perception, Inc., both robotics systems companies, making QinetiQ a leading force in unmanned systems development. It also acquired Analex Corporation, a systems engineering company specializing in intelligence and homeland security applications. QinetiQ has also acquired several IT and management services companies.

VT Group

Both a major shipbuilder and a logistics, training and facilities management company, VT Group (formerly Vosper-Thornycroft) has moved into the U.S. market mainly through its services and training business units. VT Group maintains two U.S. subsidiaries, VT Services, Inc. and VT Education and Skills. The former consists of three business units: VT Griffin, Inc. (Atlanta), formerly Griffen services, a facilities management company; VT Milcom, formerly MILCOM Systems, a professional and technical services company supporting a range of U.S. Navy programs; and VT Aepco, formerly AEPCO, an electronic document management company supporting the U.S. Army and Marine Corps. VT Education and Skills is a training company working in logistic support operations. VT Group also maintains a free-standing naval architecture company in the United States, called Maritime Dynamics, Inc. (Lexington Park, Md.), providing engineering and consulting services to the U.S. Navy and commercial customers. VT now has more than 3,500 employees in the United States, and annual U.S. revenues in excess of \$250 million.^h

^h InfoBase Publications, DACIS Companies Database.

Other Foreign (Non-UK) Firms

Finmeccanica

After rationalizing its operations in Europe, Finmeccanica, the leading Italian defense firm, has increasingly looked toward the United States. Finmeccanica has used three basic strategies for growing its North American presence:

- Successfully partnering with U.S. firms to pursue complex system contracts—e.g., U.S. Marine One Presidential helicopter (Lockheed Martin) and C-27 Joint Cargo air vehicle (L-3 Communications);
- Establishing a significant part of production in a U.S. location—e.g., the production by AgustaWestland in Philadelphia, and by Alenia in Jacksonville, Fla., for the C-27J Spartan for the U.S. Army and Air Force; and
- Through acquisition—notably the recent \$4 billion acquisition of DRS Technologies, a leading U.S. subsystem firm that possesses some sensitive product technologies.

Under the arrangements negotiated with the U.S. government, approximately 30 percent of DRS's business will be placed under a proxy agreement because of perceived sensitivities while the remainder will be under a Special Security Agreement. Italy's strong relationship with the United States, together with its salutary track record in areas such as export controls and intelligence sharing, no doubt facilitated the U.S. government decision to approve the acquisition in October 2008.

Finmeccanica's growth has been remarkable. In 2003, when the company opened its Finmeccanica Inc. office in the United States, it had negligible defense revenues in the United States. Its only other U.S. presence was several commercial businesses (U.S. subsidiaries of AgustaWestland and Selex Systemi Integration).

From that small beginning, Finmeccanica—excluding DRS Technologies—has grown to \$1 billion in sales to U.S. defense customers (primarily in the Marine One Presidential helicopter, C-27 and military radios) and approximately 3,000 U.S. employees. Today, Finmeccanica's defense units have a range of defense facilities in the United States, including AgustaWestland, Alenia Aero (Jacksonville, Fla., facility for C-27J), Selex Sensors (lasers). Finmeccanica today has three companies operating under Special Security Agreements—again, excluding DRS.

SAFRAN Group

SAFRAN, a French-based conglomerate formed by the merger of Snecma (which previously acquired Labinal) and Sagem, focuses on propulsion (space, aerospace), aircraft equipment (landing gear, brakes, avionics), homeland security and defense (including night vision), and communications. Today, SAFRAN North America has 35 companies in the United States with 42 offices and facilities in 19 U.S. states. In total the SAFRAN Group has \$3 billion in U.S. sales (excluding its CFM engine joint venture with General Electric) and 3,500 U.S. employees. SAFRAN does not have a classified facility in the United States

today (which in good measure reflects that the nature of its businesses do not require clearances).

SAFRAN's businesses include a range of products for commercial and military products spread through its various companies. It is difficult to estimate precisely what portion of its \$3 billion in for defense-related work. However, it should be noted that SAFRAN has a presence on at least 17 U.S. military or security related (Coast Guard) programs, providing engines, wiring, brakes, landing gear and various other components and systems; the programs include among others the F-18, V-22, P-8, E-3, F-16, F-22, T-45 and the U.S. Army Lakota (i.e., light utility helicopter). Also, SAFRAN's security and defense group has a business unit Vectronix that provides night vision and related equipment to the U.S. Army. Hence, it is reasonable to conservatively estimate that SAFRAN earns more than \$1.5 billion per annum from U.S. defense related sales.ⁱ SAFRAN too has experienced significant growth in U.S. sales—approximately 13 percent per annum in recent years.

EADS

EADS, a leading European aerospace and defense firm, has broad-ranging capabilities. The Group includes the aircraft manufacturer Airbus, Eurocopter and EADS Astrium, the European leader in space programs. The company's core business areas include civil and military aircraft (fighter jets, transport, and commercial), helicopters, space, defense electronics, and related services. In Europe, EADS is a leading military platform provider (the A400M, Eurofighter, Galileo, and other key programs). EADS is actively looking to leverage these capabilities and build a broad-based presence in the U.S. market.

EADS has over the last decade developed its U.S. commercial and defense business through a variety of approaches, including acquisitions, teaming with U.S. primes on program pursuits and winning programs, and developing U.S. manufacturing capabilities.

Today, EADS North America, which includes all of EADS' U.S. operations other than Airbus, has numerous U.S. locations and business units. The Group today has approximately \$1.1 billion in total U.S. sales (defense and commercial), with \$350 million in defense. Its total headcount is 2,100 with roughly 800 in defense.

EADS has grown this business markedly since 2003, when it had roughly \$500 million in revenues—an increase of \$600 million in five years. The growth is even more striking when considering that EADS sold several businesses during that time frame.

EADS developed this business in part through acquisitions—TYX in 2001, Racal Instruments in 2004, Talon Instruments in 2005, and Plant CML in 2008. Most of these were relatively small and near or below \$100 million except Plant CML, which was considerably larger. Moreover, these acquisitions involved dual-use businesses (commercial and defense) with a focus on relatively non-sensitive areas of the defense market: air turbine drives and environmental controls for military and commercial applications, automatic test equipment software and programming, electronic test and measurement equipment, systems and software, and management and radio dispatch products for emergency call centers.

ⁱ A leading aerospace industry analyst advised that roughly 40-60 percent of SAFRAN's U.S. sales of \$3 billion were defense related. Moreover, as noted above, the \$3 billion does not include GE's share of revenue from sales of CFM engines to the U.S. military, which is separately accounted for.

EADS has also teamed with a variety of U.S. primes on major programs and bid on its own. For example, in its major U.S. win, Eurocopter was selected in 2006 to provide Light Utility Helicopters (LUH) to the U.S. Army; a number of U.S. firms are teammates on the program as well. EADS has established a production and assembly plant for LUH in Columbia Mississippi; Eurocopter will provide some components from its operating locations in France. LUH is the main source of EADS' North America's defense revenue today.

EADS, teamed with Northrop Grumman, also won the Air Force tanker contract in 2008 but this award was overturned on protest. The program is now in hiatus pending decisions by the new Administration on how, if at all, to restructure it.

EADS also provides a range of other systems, subsystems and products to the U.S. military, including various rotorcraft (EC-120 and AS350), maritime patrol aircraft for the U.S. Coast Guard (CN-235) and engine upgrades for Coast Guard helicopters, as well as a variety of subsystems (air turbine motors for the C-130, environmental control systems for the AH-64 Apache, pod cooling control systems for the F-18 Hornet and small aerial targets.

EADS recently reorganized its U.S. business under the umbrella of EADS North America such that all of them are operating under a special security arrangement with the Defense Security Service. EADS also operates one business, EADS North America Defense Security and Systems Solutions, Inc., under a proxy; that firm is a provider of information assurance solutions, including computer and network security solutions and services to government agencies and commercial organizations.

Saab

Saab is the largest defense contractor in the Nordic countries, participating in air defense, missile systems, C-4I, communications, electronic warfare and underwater operations. Saab sales in the United States, however, consist of unique, niche products despite the company's success in selling platforms in other markets.

Saab's sales into the U.S. defense market totaled about \$300 million last year; approximately half of that total was from direct sales by the Saab Group companies in Sweden and the other half made by Saab's U.S. companies. Over the years, Saab has established several companies in the United States to sell and service both its commercial aviation and defense products. Fairbrook, Inc. Group was established to handle the financing and leasing of Saab 340 and Saab 2000 aircraft. The group bases its operations in Sterling, Virginia, in the same space as Saab Aerotech of America LLC, the Saab company that provides after-market support for the Saab 340 and Saab 2000 aircraft, including sales of spare parts and related services. Saab TransponderTech USA LLC provides sales of Saab transponder equipment in North and South America, and Saab International USA LLC is the main marketing arm in the United States for the parent company, Saab AB.

Initially, Saab's presence in the U.S. defense market was as a buyer of U.S. military equipment and technology. Today, however, Saab has two established U.S. companies, Saab Training USA LLC, which provides full simulation systems for the U.S. Army and Air Force, and Saab Barracuda LLC, which provides camouflage materials for the U.S. Army. Both companies are cleared to perform classified contracts under Special Security Agreements.

The engineers and military trained specialists at Saab Training USA in Orlando, Florida support Saab Training devices and simulators wherever U.S. forces are stationed or

deployed. Saab Training has had a presence in Orlando since 1999. Saab Barracuda penetrated the U.S. market by acquiring BAE Systems' camouflage concealment and deception company located in Lillington, N.C., in 2002. Although Saab Barracuda has licensed camouflage technology, a key ingredient of Signature Management, to U.S. companies since 1974, a key to accessing the U.S. market was entering into an agreement with BAE Systems in 1994 to provide technical and marketing cooperation to sell Saab products in the United States. Saab implemented its strategic plan to grow its presence in the U.S. defense market both organically and through acquisitions by first utilizing Technical Assistance Agreements and Manufacturing License Agreements in cooperation with BAE Systems, and then acquiring BAE Systems' operations.

Last year, Saab entered into a cooperation agreement with Sensis Corporation to market and support Saab's GIRAFFE AMB radars, an alliance that should help promote the products offered by Saab Microwave Systems. In addition, Saab Avitronics has a cooperation agreement with BAE Systems in Austin, Texas regarding the marketing and production of countermeasure products and the BOL chaff dispenser system. Saab Avitronics also cooperates with SEKAI in Los Angeles, Calif., to promote and sell its full range of electronic warfare products, including radar, UV and laser sensors, as well as jammers, decoys and countermeasure dispenser systems.

Thales

Thales, a leading multinational defense electronics firm with its primary operations in France and the United Kingdom (UK), has proceeded to develop its U.S. defense business over the last decade through a multifaceted strategy that included key acquisitions, joint ventures and teaming with U.S. partners, and organic growth.

Today, Thales North America, has 15 locations in the United States, including its U.S. headquarters operations, with roughly 3,400 employees overall (including joint ventures) and \$2 billion in overall revenues (commercial and defense) including exports (and \$1.3 billion excluding exports). Thales North America sells a range of subsystem and related electronic products in the United States in avionics and other aviation support products, communications, and encryption for military and commercial customers. In defense, Thales North America has roughly \$800,000 to \$1 billion in revenues from sales to U.S. defense customers and approximately 1,500 employees focused on defense; the defense revenues and employees largely reflect the activities of Thales Communications Inc. (TCI), a provider of tactical radios, and Thales' portion of the revenues from Thales Raytheon Systems (TRS), Thales joint venture with Raytheon as well as sales of some products (approximately \$200-\$300 million) directly from Europe.

TCI, Thales' primary U.S. defense firm, is based in Clarksburg, Md., and has approximately 560 employees. Thales acquired TCI when it purchased Racal in the UK in 2000. TCI (formerly Racal Communications) is primarily a producer of tactical radios for the U.S. military, including U.S. Special Forces Command. TCI is a participant in the Joint Tactical Radio System program, the DoD's multifaceted radio of the future program. TCI operates under a proxy agreement, which was in place when it acquired the firm from Racal. Significantly, even under the proxy, Thales has been permitted to introduce its own proprietary technology into TCI (largely from old Racal in the UK), which TCI in turn has adapted to the U.S. market.

TRS is a path-breaking product line joint venture Thales entered into with Raytheon in 2000 covering air defense radar, air operation command and control systems, and battlefield and counterbattery radars. TRS is based in Fullerton California and has 800 employees.

Thales North America also has teamed with a number of U.S. defense firms, including ITT (radar), Northrop Grumman (naval) and DRS Technologies for sonar. As Thales operates as a subsystem supplier in the United States, it is largely dependent on partners for its business. Thales looks increasingly, however, to make acquisitions and open U.S. manufacturing facilities that will allow it to compete higher up the food chain and, in effect, be masters of its own fate in the U.S. market.

What is striking is the overall organic growth of Thales North America's defense business since these acquisitions. With the increased demand for tactical radios due to ongoing U.S. operations in Afghanistan and Iraq, TCI's business has grown markedly—from roughly \$100 million in sales in 2003 to approximately \$350 million in sales in 2007. TRS also has experienced growth—with Thales' revenues from the venture growing from roughly \$100 million in sales to roughly \$400-\$500 million in 2007.

Thales also recently entered into a joint venture in 2007 with DRS Technologies covering surface and undersea warfare related products (e.g., sonar) that operates under a Special Security Agreement.

Appendix IV

Proposed DoD Globalization Executive

As discussed in Chapter 6, the basic operational functions of a proposed new U.S. Department of Defense (DoD) Globalization Executive would be to:

- Develop roadmaps for foreign capability acquisition and interoperability to support and enhance coalition war fighting capabilities and seek to execute those roadmaps—working together with other DoD components and foreign governments and drawing on efforts to date;
- Identify potential cooperative or U.S. programs that can be structured or modified to support these roadmaps (for example, possible network-centric “plug and play” architecture for NATO building on experiments already underway there);
- Rationalize and harmonize technology transfer decision-making and national disclosure policy in DoD and the services in support of these goals while recognizing the need to safeguard sensitive technology and technical information from disclosure and share technology in a secure way;
- Take steps to develop a more open and competitive Transatlantic marketplace (both supply and demand) within a community of trusted friends. This would include putting in place policies that support this goal; commencing or continuing appropriate negotiations with relevant foreign governments and organizations in support of these goals (including the EU), including in the area of procurement, technology transfer, industrial security and market access; and the establishment of “one stop” Pentagon review, with input from all relevant DoD components, over the foreign acquisition of U.S. defense firms (where Exon-Florio provision and industrial security issues are considered together).

To execute these functions, the senior official should be afforded management oversight and authority over the following policies, DoD functions and components:

- Policy guidance on promoting foreign capability development and interoperability, working together with the Joint Chiefs of Staff and the various services as well as other DoD components. The position thus would incorporate functions currently performed in this arena by the Assistant Secretary of Defense for Global Affairs, including the Office of the Deputy Assistant Secretary of Defense for Partnership Strategy.
- Export Control, Technology Transfer, and related functions:
 - The Defense Technology Security Administration, which manages defense trade controls, and any related export control policy and functions in acquisition, logistics and technology;
 - The Low Observables/Counter-Low Observable Committee, which manages releasability of certain technology;
 - National disclosure policy decision-making; and

- Anti-tamper policy.
- Defense Industrial Policy, including foreign investment in U.S. defense firms and globalization of the Defense Supplier Base:
 - The Office of the Deputy Under Secretary of Defense for Industrial Policy, which reviews mergers and acquisitions, and manages policy with respect to the defense industrial base; and
 - Provide policy guidance to the Defense Security Service with respect to “Foreign Ownership, Control and Influence” (FOCI) decisions on appropriate industrial security arrangements made by its FOCI Branch;

International Contracting, including the International Contracting office in the office of Defense Procurement, Acquisition Policy & Strategic Sourcing in Acquisition, Logistics and Technology (focusing on policy and negotiations of reciprocal defense procurement Memoranda of Understanding and other agreements relating to global defense markets);

International Armaments Cooperation, including the Office of Defense Cooperation in Acquisition, Logistics and Technology and the provision of guidance and oversight to other DoD components with respect to international armaments cooperation policy and execution.

About the Authors

Jeffrey P. Bialos is a partner in the Washington, D.C., office of Sutherland Asbill & Brennan, a national law firm. He provides legal, business and strategy advice on defense, national security and homeland security matters, including mergers and acquisitions, anti-trust, procurement, export controls, national security reviews of foreign acquisitions, the Foreign Corrupt Practices Act, and international business practices.

Mr. Bialos also serves as Executive Director of the Program on Transatlantic Security and Industry at the Center for Transatlantic Relations at Johns Hopkins University's School of Advanced International Studies. Mr. Bialos was appointed by Virginia's Governor Warner (2004) and recently re-appointed by Governor Kaine (2006) to the Secure Commonwealth Panel, which oversees Virginia's homeland security planning. Mr. Bialos also recently served as a member of a Defense Science Board Task Force examining the future of the U.S. defense industry.

Previously, Mr. Bialos held several senior government positions. From 1998 to January 2000, he served as Deputy Under Secretary of Defense for Industrial Affairs. In that capacity, he led the Department's work on defense mergers and acquisitions, advised on policies and programs concerning the defense industrial base, and managed negotiations with U.S. Allies concerning defense industrial cooperation. Mr. Bialos oversaw the review of several path-breaking Transatlantic defense acquisitions and was integrally involved in developing the Defense Trade Security Initiative, a major reform of U.S. defense export controls. Mr. Bialos is a recipient of the Department of Defense *Distinguished Public Service Medal*. Previously, Mr. Bialos served as Special Advisor to Under Secretary of State for Economic, Business and Agricultural Affairs Stuart Eizenstat (October 1997—August 1999) and as the Principal Deputy Assistant Secretary of Commerce for Import Administration (June 1996—September 1997).

Mr. Bialos has co-authored several books and authored and co-authored numerous articles and several books on national security defense, international and legal subjects. He is a member of the New York Council on Foreign Relations.

Christine E. Fisher is an independent consultant on defense and aerospace industry, mergers and acquisitions, and U.S. and European defense acquisition policy. She provides strategic counsel and analysis to corporations, law firms, the investment community and the U.S. Department of Defense. She serves on numerous Defense Science Board Task Force studies and also serves as a Special Fellow to Johns Hopkins University School of Advanced International Studies, Center for Transatlantic Relations.

Ms. Fisher formerly held various management positions in the Department of Defense, including in U.S. Air Force acquisition program offices (relating to aircraft and C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance)), in Foreign Military Sales, and in the Office of the Secretary of Defense. Most notably, for 10 years she served in leadership positions in the Office of the Deputy Under Secretary of Defense (Industrial Policy). As a Deputy Director, she led Department of Defense teams in scores of industry merger and acquisition reviews and in industry sector and economic stud-

ies and supported reviews of cases for the Committee on Foreign Investment in the United States (CFIUS). She participated in authoring many key Department of Defense policies and guidelines on defense acquisition, competition, industry, consolidation and mergers and acquisitions.

Stuart L. Koehl is a defense analyst and military historian with nearly 30 years of professional experience. He is presently a Research Fellow at the Center for Transatlantic Relations at Johns Hopkins University's School of Advanced International Studies as well as an independent consultant to the U.S. Government and the defense industry. His specific areas of expertise include strategic, tactical and operational analysis of U.S. and foreign military systems, technology assessment, doctrinal development, training and logistics. He has written extensively on defense and international security issues and co-authored *A Dictionary of Modern War* with Edward N. Luttwak, as well as a number of books and monographs with Jeffrey P. Bialos. He is a regular contributor for military affairs to the *Online Standard*, the online journal of *The Weekly Standard* magazine.

Co-Editor and Co-Contributors

Christer L. Mossberg is an attorney with the Washington, D.C., office of Sutherland Asbill & Brennan LLP. He advises clients on all aspects of international business, including investment transactions in the United States and abroad, contracting with the federal government, international trade disputes, national security matters, technology transfers, homeland security issues, licensing of IP and corporate compliance under export control regimes and other multilateral trade arrangements. He has considerable experience addressing the complex issues that arise in the defense and government contract fields, including government contract procurements, novations and terminations; national security review of foreign acquisitions; and structuring national security arrangements to meet concerns regarding foreign ownership, control and influence. He has written and lectured extensively on cross-border transactions and national security matters. He has been a Fulbright Professor and currently teaches courses on international trade and national security at the Monterey Institute of International Studies.

Co-Contributors

Giovanni Gasparini is a Senior Fellow, Defence and Security, at the Istituto Affari Internazionali (IAI), in Rome, Italy and a Co-Director of the IAI Transatlantic Program on ESDP. Mr. Gasparini has a degree in economics from Luigi Bocconi University in Milan, Italy. He joined IAI in 1999; his main areas of research are: European Security and Defense Policy, NATO, space, aerospace and defence industry, defence economics and Transatlantic relations. He has published extensively on these subjects and he is a member of the Editorial Board of the "The International Spectator." Mr Gasparini previously served in the Italian Air Force; he was a military Researcher at CeMiSS, the Military Centre for Strategic Studies of the Italian Ministry of Defense. Since 2001, he is a consultant to CeMiSS, where he contributes regularly to the Monthly Observatory on European Defence and Defence Industry issues published by CeMiSS. Mr. Gasparini also has been a Visiting Fellow at the European Union Institute for Security Studies in Paris, the Stockholm International Peace Research Institute, the Fondation pour la Recherche Stratégique in Paris, and the International Security Information Service-Europe in Brussels; he has been a member of the

U.S. State Department International Visitors Program as well as manager and participant of numerous European defence, security and space projects for the European Commission, the European Defence Agency, the European Parliament, and the European Space Agency.

Andrew James is a Senior Lecturer in Science and Technology Policy and Management at Manchester Business School and a member of the Manchester Institute of Innovation and Research. In the defense and security field, he has held a number of international advisory positions, including membership of the European Union Institute for Security Studies Independent Expert Working Group on the European Commission's Green Paper on Defence Procurement. He also served as an External Expert on defence matters and Rapporteur to the European Union Research Advisory Board. During 2008, he led a project advising the European Defence Agency on how to measure the strengths and weaknesses of the defence technological and industrial base in Europe.

FORTRESSES & ICEBERGS

Jeffrey P. Bialos • Christine E. Fisher • Stuart L. Koehl

“The United States needs a new model of “globalized” national security for this changing world: we must realign longstanding policies away from go-it-alone approaches to coalition-building and cooperation in support of shared objectives with our allies. ... [T]he Transatlantic relationship stands at the center of our approach to ensuring our future security. ...

Now, when we most need to re-examine our Transatlantic security model, this new two volume study by Jeff Bialos and his co-authors ... provides key insights and a roadmap for the United States to leverage Transatlantic security opportunities.”

-Dr. Jacques Gansler, former Under Secretary of Defense for Acquisition, Technology & Logistics

This pathbreaking study is one of the most objective ever to examine the Transatlantic defense market and its implications for U.S. policy. On the demand side of the market, do “Fortresses” exist or are they developing on either side of the Atlantic? On the supply side, are the defense industries stand alone “Icebergs” or increasingly integrated?

This comprehensive two volume study has a rich data set—with nearly 231 Figures and Tables and in depth chapters on the United States and the seven European markets studied. The study:

- uses disciplined metrics of determine to what extent defense markets are open and competitive.
- examines the role of the European Union in the defense market—is an EU preference for buying European evolving and will it ultimately lead to a protected European market?

The study makes important findings/recommendations on core issues:

- the need for deeper defense relations with the EU—increasingly the focal point in Europe for low intensity warfare;
- the criticality of export control reforms to the Transatlantic defense market and coalition war fighting capabilities; and
- the need for market opening measures in defense trade and investment, including curbs on offsets, related industrial practices, and bribery in third country defense markets.

The Center for Transatlantic Relations is a non-profit research center that engages international scholars, students, government officials, parliamentarians, journalists, business executives and other opinion leaders on contemporary challenges facing Europe and North America. The goal of the Center is to strengthen and reorient transatlantic relations to the dynamics of a globalizing world. The Center serves as the coordinator for the American Consortium on European Union Studies (ACES), which is a partnership among five national-capital area universities to improve understanding of the European

Union and U.S-EU relations. ACES has been recognized by the European Commission as the EU Center of Excellence in Washington, DC. In 2009 the Center was named by Foreign Policy magazine as one of the “Top 30 Go-To Global Think Tanks.” The Center is an integral part of John Hopkins University’s Paul H. Nitze School of Advanced International Studies (SAIS). Johns Hopkins is one of the nation’s premier research universities, and SAIS is one of America’s leading graduate schools devoted to the study of international relations.

JOHNS HOPKINS
UNIVERSITY



ISBN 978-0-9841341-1-3



9 780984 134113

9 0000

